

Service
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200WP7EB/00
200WP7ES/00
200WP7ES/01



Service Manual

Horizontal frequencies
30 - 98 KHz

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SAFETY NOTICE

ANY PERSON ATTEMPTING TO SERVICE THIS CHASSIS MUST FAMILIARIZE HIMSELF WITH THE CHASSIS AND BE AWARE OF THE NECESSARY SAFETY PRECAUTIONS TO BE USED WHEN SERVICING ELECTRONIC EQUIPMENT CONTAINING HIGH VOLTAGES.

CAUTION: USE A SEPARATE ISOLATION TRANSFORMER FOR THIS UNIT WHEN SERVICING.

REFER TO BACK COVER FOR IMPORTANT SAFETY GUIDELINES

Important Safety Notice



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Proper service and repair is important to the safe, reliable operation of all Philips Consumer Electronics Company** Equipment. The service procedures recommended by Philips and described in this service manual are effective methods of performing service operations. Some of these service operations require the use of tools specially designed for the purpose. The special tools should be used when and as recommended.

It is important to note that this manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It is also important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Philips could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Philips has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by Philips must first satisfy himself thoroughly that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.

* *Hereafter throughout this manual, Philips Consumer Electronics Company will be referred to as Philips.

WARNING

Critical components having special safety characteristics are identified with a  by the Ref. No. in the parts list and enclosed within a broken line* (where several critical components are grouped in one area) along with the safety symbol  on the schematics or exploded views.

Use of substitute replacement parts which do not have the same specified safety characteristics may create shock, fire, or other hazards.

Under no circumstances should the original design be modified or altered without written permission from Philips. Philips assumes no liability, express or implied, arising out of any unauthorized modification of design. Servicer assumes all liability.

* Broken Line



TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE MANUAL.

Take care during handling the LCD module with Backlight unit

- Must mount the module using mounting holes arranged in four corners.
- Do not press on the panel, edge of the frame strongly or electric shock as this will result in damage to the screen.
- Do not scratch or press on the panel with any sharp objects, such as pencil or pen as this may result in damage to the panel.
- Protect the module from the ESD as it may damage the electronic circuit (C-MOS).
- Make certain that treatment person's body are grounded through wrist band.
- Do not leave the module in high temperature and in areas of high humidity for a long time.
- Avoid contact with water as it may a short circuit within the module.
- If the surface of panel become dirty, please wipe it off with a soft material. (Cleaning with a dirty or rough cloth may damage the panel.)

FOR PRODUCTS CONTAINING LASER :

DANGER- Invisible laser radiation when open.
AVOID DIRECT EXPOSURE TO BEAM.

CAUTION- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

CAUTION- The use of optical instruments with this product will increase eye hazard.

ELECTRICAL SPECIFICATION

1. General

1.1. Product description

The Hudson 7, 20.1"WSXGA TFT flat panel monitor is specified as a display peripheral with Analog video signal input, Digital video input 20.1" TFT LCD display.

Horizontal scan range is 30 - 98K Hz and refresh range is 56 - 76 Hz. This scan range allows it to display resolution up to 1680*1050 non-interlaced at 60 Hz refresh rate. The image can be adjust through OSD control, these adjustments can be stored on an board memory including 40 preset modes and 15 factory preset modes.

All optical characteristics (including WHITE-D, Brightness, and so on) are determined according to panel specification after warming up approximate 30 minutes that brightness stability is optimal, and follows strictly after panel specification

1.2 Destination:

1.3. Basic data

1.3.1 LCD panel

Type NR. : M201EW01 V0 (AUO)
Outside dimensions : 459.4(H)*296.4(V)*22.8(D) (Typ) mm
Pixel Pitch (mm) : 0.258 mm x 0258mm
Color pixel arrangement : RGB vertical stripes
Display surface : low reflection, antiglare with hard coating
Color depth : 16.7M colors (8 bits)
Backlight : Six CCFL's
Active area(WxH) : 433.44x270.9mm (20.1"W diagonal)
View angle : Horizontal 176& Vertical 176 degree (CR>=10)
Contrast ratio : 800:1 (Typ) ,400 :1 (min)
White luminance : Panel original color >240nits (min), 300 nits (Typ.)

1.3.2. Power supply

Main voltage : AC 90 - 135 Vrms and 170 - 264 Vrms, 50/60±2 Hz
Power cord length : 1.8M

Power cord type : 3 lead with earth plug

Power indicator : LED (ON: green, Standby: amber, NEW MODE: flashing Green twice per second before user adjusts and save it).

Auto power saving : EPA, Nutek, VESA DPMS

Mode	HSYNC	VSYNC	Video	Pwr-cons.	Indication	Rec. time
Power-On	On	On	active	< 60 W < 48W w/o USB	Green LED	
Off	Off	On	blanked	< 2.0 W	Amber LED	< 3 s
Off	On	Off	blanked	< 2.0 W	Amber LED	< 3 s
Off	Off	Off	blanked	< 2.0 W	Amber LED	< 3 s
DC Power Off			N/A	< 1.0 W	LED Off	

1.3.3. Horizontal scan : 30 - 98 KHz

1.3.4. Vertical scan : 56 - 76 Hz

1.3.5. Input signals

1.Signal input level

Video : 0.7 Vp-p Linear / 75 ohms

Sync : H/H+V, V TTL level, composite sync, sync on green Impedance

Video : Terminated with 75 ohms

Sync : Terminated with 2K2 ohms

The input signals can be applied in two different modes:

1). VESA Analog

Input signal: Video, Hsync., Vsync

Video: 0.7 Vp-p, input impedance, 75 ohms @DC

Sync. : Separate sync TTL level, input impedance 5k ohms

Hor. sync Positive/Negative

Ver. sync Positive/Negative

2). Intel DVI Digital

Input signal: Four channel TMDS signals

1.3.6 Input connectors

(1) Input analog D-sub connector pin assignment

PIN No.	SIGNAL
1	Red
2	Green/ SOG
3	Blue
4	Sense (GND)
5	NC
6	Red GND
7	Green GND
8	Blue GND
9	DDC +5V
10	Cable detect (GND)
11	Sense (GND)
12	Bi-directional data
13	H/H+V sync
14	V-sync
15	Data clock

(2) Input DVI-D connector pin assignment

Pin No.	Description
1	TMDS data2-
2	TMDS data2+
3	TMDS data2/4 shield
4	NC
5	NC
6	DDC clock
7	DDC data
8	NC
9	TMDS data1-
10	TMDS data1+
11	TMDS data1/3 shield
12	NC
13	NC
14	+5V
15	Ground (return for +5V and H/Vsync)
16	Hot plug detect
17	TMDS data0-
18	TMDS data0+
19	TMDS data0/5 shield
20	NC
21	NC
22	TMDS clock shield
23	TMDS clock+
24	TMDS clock-

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Signal interface

- 15Pins, D-sub male with DDC2B Pin assignments
- 24Pins, DVI-D male with DDC2B Pin assignments

Sync polarity:

- Hori.sync positive/negative
- Vert.sync positive/negative

1.3.7. Controls:

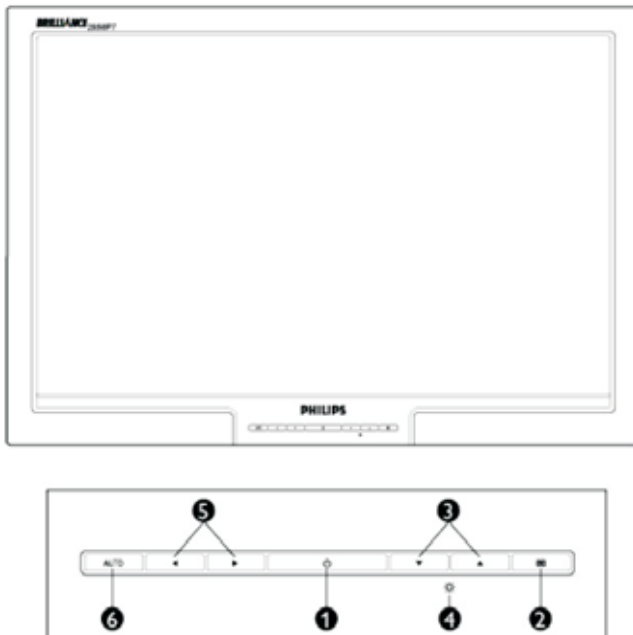
- Front side:
- DC power switch
 - OSD function key (OK)
 - UP
 - DOWN
 - RIGHT
 - LEFT
 - AUTO

Rear:

- D-SUB
- DVI-D
- Power cord socket

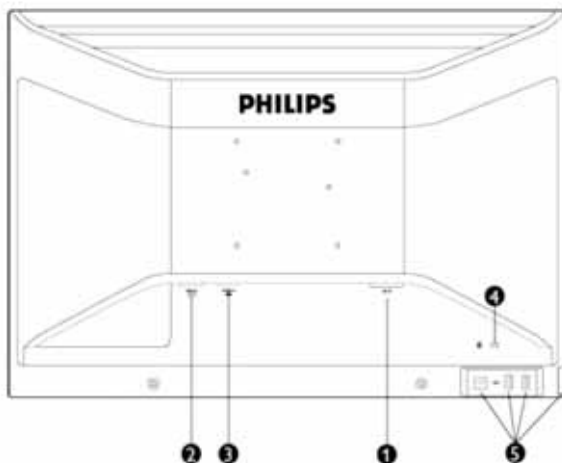
Installing Your LCD Monitor

Front View Product Description



- 1 To switch monitor's power On and Off
- 2 To access OSD menu
- 3 To adjust the OSD
- 4 To adjust brightness of the display
- 5 To adjust the OSD
- 6 AUTO Automatically adjust the horizontal position, vertical position, phase and clock setting

Rear View

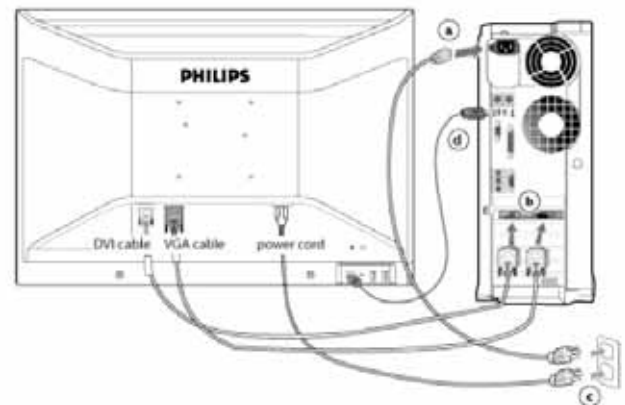
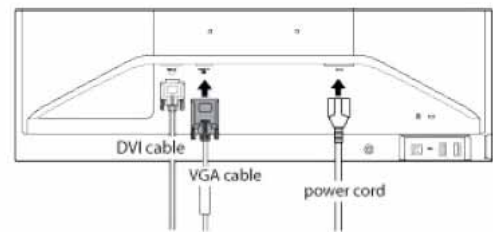


- 1 AC power input
- 2 DVI-I input
- 3 D-SUB Input
- 4 Kensington anti-theft lock
- 5 USB upstream and downstream

Connect to PC

Connect the power cord and DVI cable to the back of the monitor firmly.

(Philips has pre-connected VGA cable for the first installation.)



Connect the cables to the back of your computer by following these

steps:

- (a) Turn off your computer and unplug its power cord.
- (b) Connect the monitor signal cable to the video connector on the back of your computer
- (c) Plug the power cord on your computer and your monitor into a nearby outlet.
- (d) USB plug
 - (1) Connect USB upstream port on monitor and the USB port on PC with a USB cable.
 - (2) The USB downstream port is now ready for any USB device to plug in
- (e) Turn on your computer and monitor. If the monitor displays an image, installation is complete.

Note: The USB plug is a pass through connection whether it can support USB 1.1 or USB 2.0 depends on your PC's specification


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Description of the On Screen Display

What is the On-Screen Display?

This is a feature in all Philips LCD monitors. It allows an end user to adjust screen performance of the monitors directly through an on-screen instruction window. The user interface provides user-friendliness and ease-of-use when operating the monitor.

Basic and simple instruction on the control keys.

When you press the  button on the front control of your monitor, the On-Screen Display (OSD) Main Controls window will pop up and you can then start making adjustments to your monitor's various features. Use the ▼▲ or the ◀▶ keys to make your adjustments



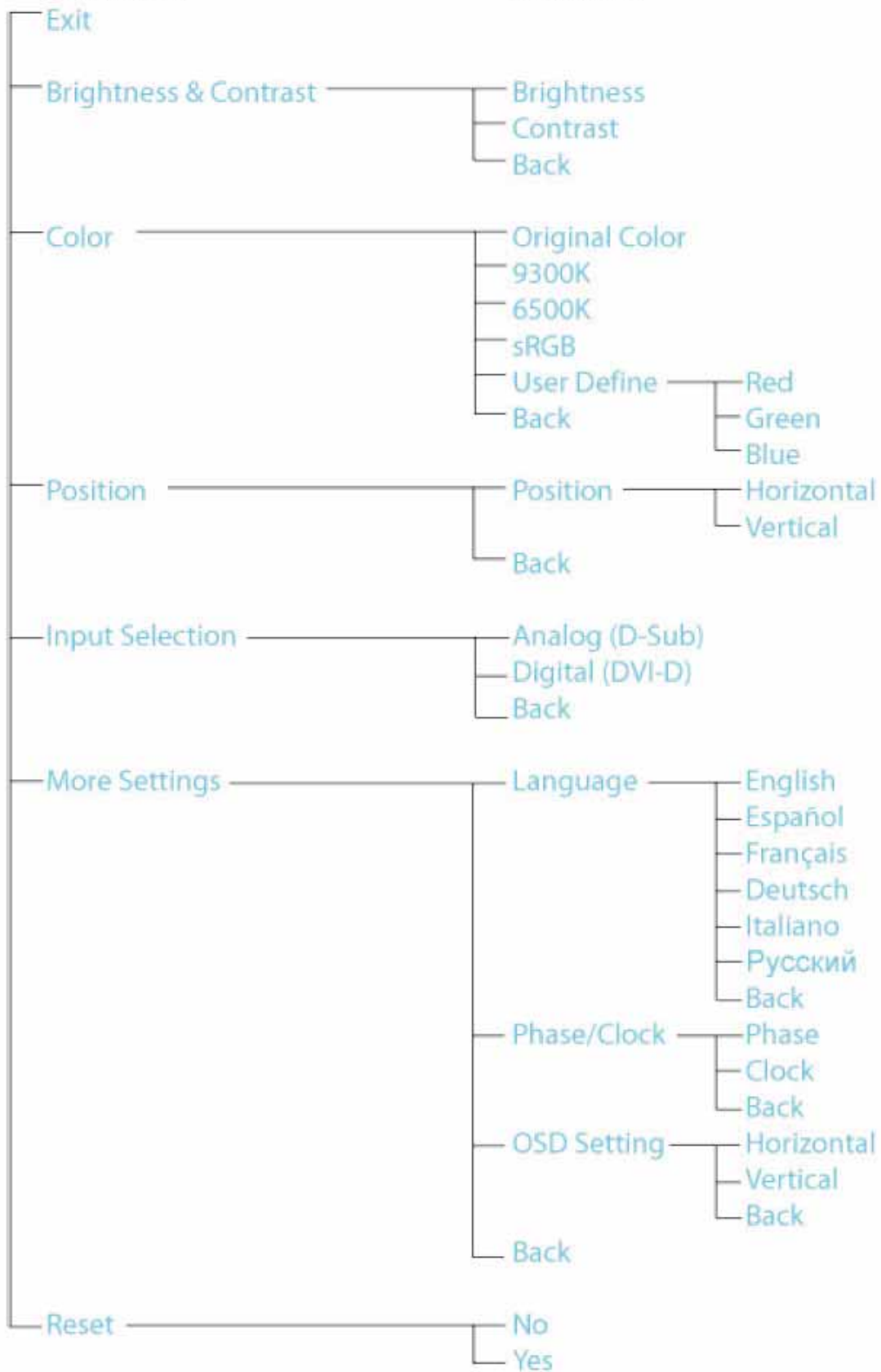
The OSD Tree

Below is an overall view of the structure of the On-Screen Display. You can use this as a reference when you want to work your way around the different adjustments later on.

Only available for Europe Model

Main Menu

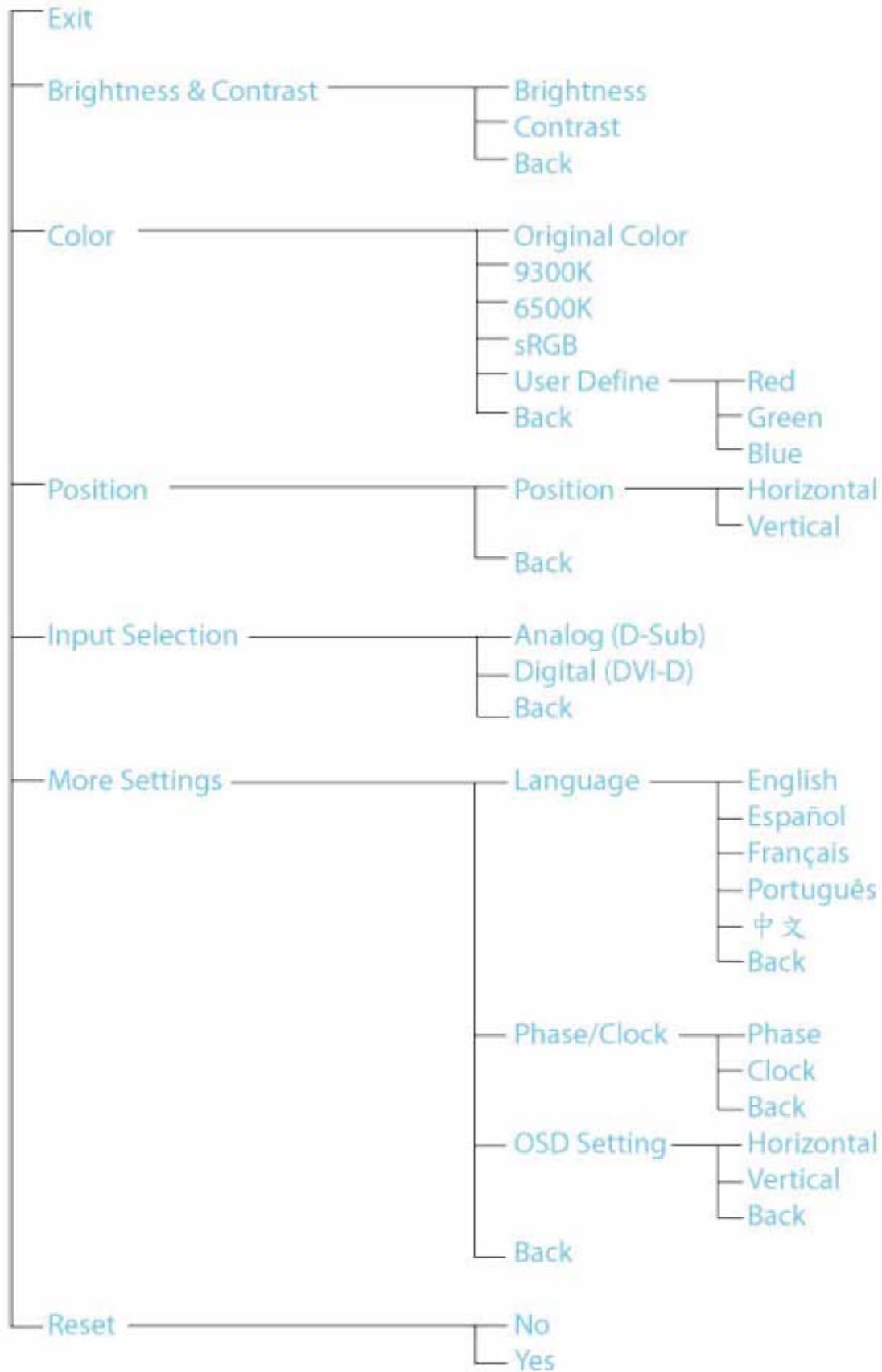
Sub Menu



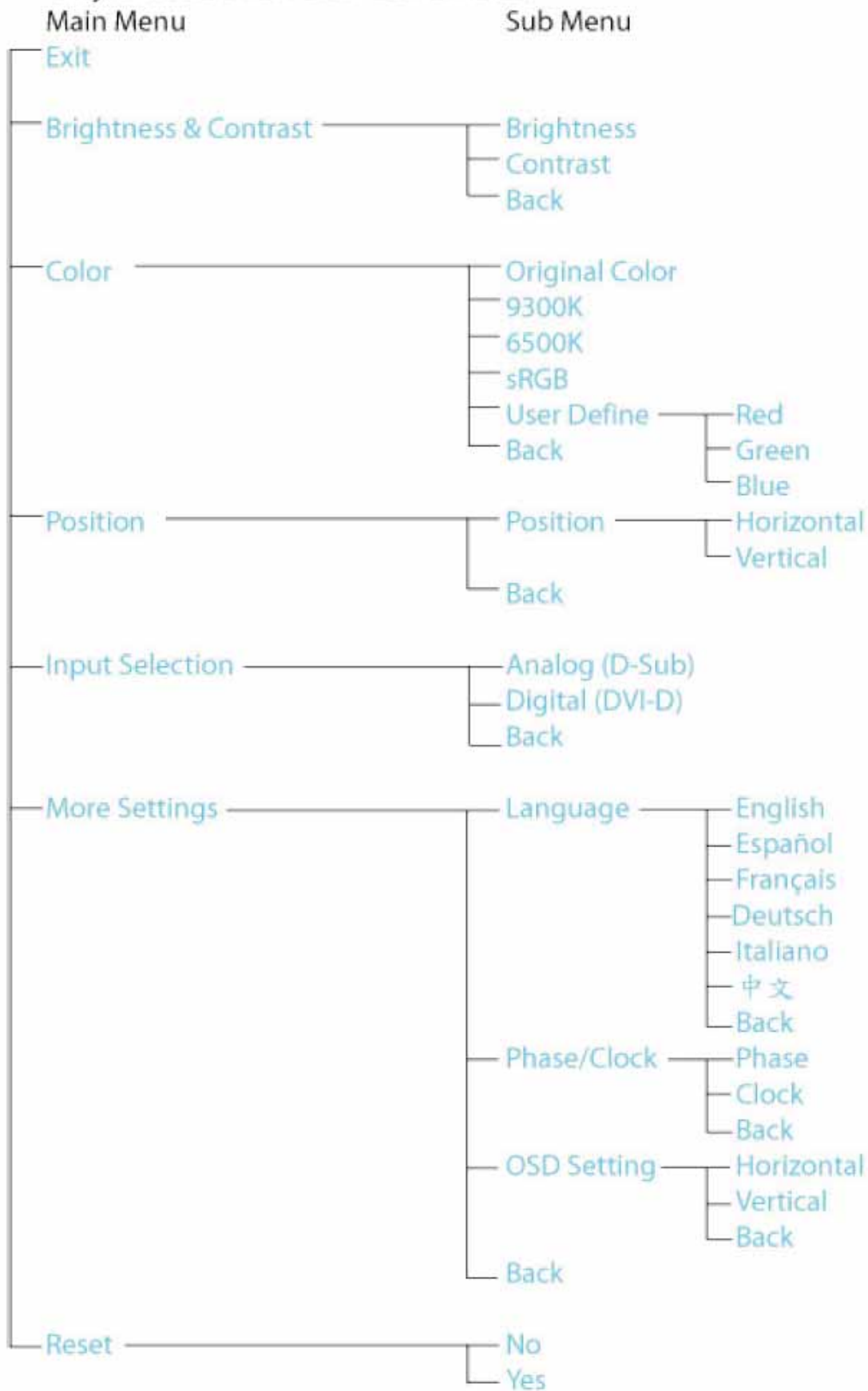
Only available for Nafta Model

Main Menu

Sub Menu



Only available for Asia Pacific Model



Safety Test Requirements

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All units that are returned for service or repair must pass the original manufactures safety tests. Safety testing requires both *Hipot* and *Ground Continuity* testing.

HI-POT TEST INSTRUCTION

1. Application requirements

- 1.1 All mains operated products must pass the Hi-Pot test as described in this instruction.
- 1.2 This test must be performed again after the covers have been refitted following the repair, inspection or modification of the product.

2. Test method

2.1 Connecting conditions

- 2.1.1 The test specified must be applied between the parallel-blade plug of the mains cord and all accessible metal parts of the product.
- 2.1.2 Before carrying out the test, reliable conductive connections must be ensured and thereafter be maintained throughout the test period.
- 2.1.3 The mains switch(es) must be in the "ON" position.

2.2 Test Requirements

All products should be HiPot and Ground Continuity tested as follows:

Condition	HiPot Test for products where the mains input range is Full range(or 220V AC)	HiPot Test for products where the mains input is 110V AC(USA type)	Ground Continuity Test requirement
Test voltage	2820VDC (2000VAC)	1700VDC (1200VAC)	Test current: 25A,AC Test time: 3 seconds(min.) Resistance required: $\leq 0.09 + R_{ohm}$, R is the resistance of the mains cord.
Test time (min.)	3 seconds	1 second	
Trip current (Tester)	set at 100 uA for Max. limitation; set at 0.1 uA for Min. Limitation	5 mA	
Ramp time (Tester)	set at 2 seconds		

- 2.2.1 The minimum test duration for Quality Control Inspector must be 1 minute.
- 2.2.2 The test voltage must be maintained within the specified voltage + 5%.
- 2.2.3 There must be no breakdown during the test.
- 2.2.4 The grounding blade or pin of mains plug must be conducted with accessible metal parts.

3. Equipments and Connection

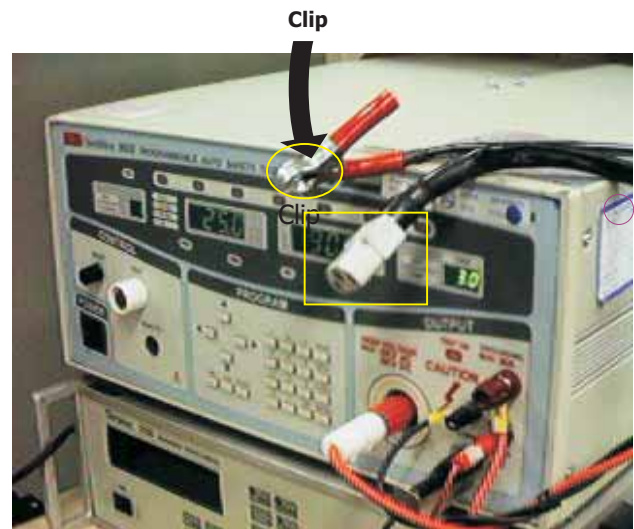
3.1. Equipments

For example :

- ChenHwa 9032 PROGRAMMABLE AUTO SAFETY TESTER
- ChenHwa 510B Digital Grounding Continuity Tester
- ChenHwa 901 (AC Hi-pot test), 902 (AC, DC Hi-pot test) Withstanding Tester

3.2. Connection

- * Turn on the power switch of monitor before Hipot and Ground Continuity testing.



(ChenHwa 9032 tester)

Video cable



Connect the "video cable" or "grounding screw" to the CLIP on your tester.

Grounding screw



Connect the power cord to the monitor.

Power outlet

4. Recording

(Rear view of monitor)

Hipot and Ground Continuity testing records have to be kept for a period of 10 years.

Front View



To Lock/Unlock OSD FUNCTION(User Mode)

The OSD function can be locked by pressing "OK" button for more than 10 seconds, the screen shows following windows for 3 seconds. Everytime when you press "AUTO" or "OK" button, this message appears on the screen automatically.



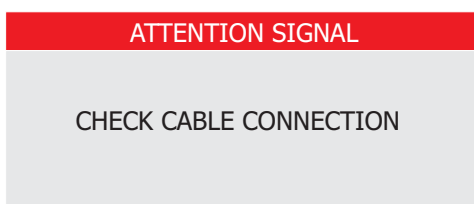
Unlock OSD function

Locked OSD function can be released by pressing "OK" button for more than 10 seconds again



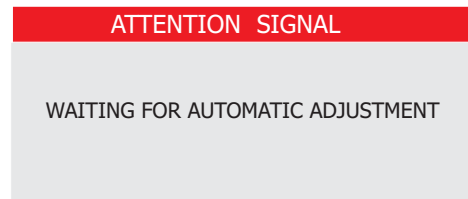
NO VIDEO INPUT

This screen appears if there is no video signal input. Please check that the signal is properly connected to the video card of PC and make sure PC is on



WAIT FOR AUTOMATIC ADJUSTMENT

This screen appears when you press the "AUTO" buttons at the same time. It will disappear when the monitor is properly adjusted



Access Aging.. Mode

Step 1 : Turn off LCD monitor, and disconnect Interface Cable between Monitor and PC.

Step 2 : [Push " " & " " buttons at the same time and hold it]+[Press power " " button until comes out " AGING screen"] => then release all buttons.

Bring up:



After 15 seconds, bring up:



After 15 seconds, bring up:



After 15 seconds, bring up:

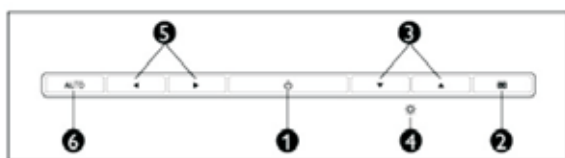


repeatlly

Connect Signal cable again=> go back to normal display

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Front Control Panel



Access Factory Mode

How to get into Factory Mode Menu

Step1:

Turn off monitor.

Step2:

[Push "AUTO" & "OK" buttons at the same time and hold it]
+[Press power "Power" button until it comes out "Windows screen"]
=> then release all buttons

Step3:

Press OK "OK" button, bring up Factory mode indication as shown in Fig2.



↑
Factory Mode indicator

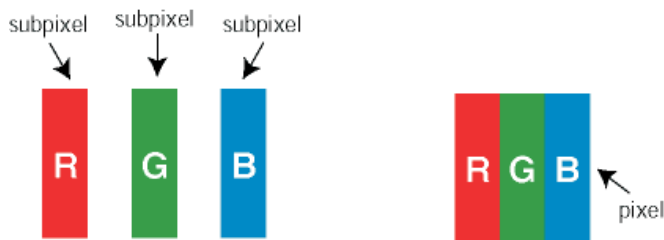
Philips' Flat Panel Monitors Pixel Defect Policy

Philips strives to deliver the highest quality products. We use some of the industry's most advanced manufacturing processes and practice stringent quality control. However, pixel or subpixel defects on the TFT LCD panels used in flat panel monitors are sometimes unavoidable.

No manufacturer can guarantee that all panels will be free from pixel defects, but Philips guarantees that any monitor with an unacceptable number of defects will be repaired or replaced under warranty.

This notice explains the different types of pixel defects and defines acceptable defect levels for each type. In order to qualify for repair or replacement under warranty, the number of pixel defects on a TFT LCD panel must exceed these acceptable levels.

For example, no more than 0.0004% of the subpixels on a 15" XGA monitor may be defective. Furthermore, Philips sets even higher quality standards for certain types or combinations of pixel defects that are more noticeable than others. This policy is valid worldwide.



Pixels and Subpixels

A pixel, or picture element, is composed of three subpixels in the primary colors of red, green and blue. Many pixels together form an image. When all subpixels of a pixel are lit, the three colored subpixels together appear as a single white pixel. When all are dark, the three colored subpixels together appear as a single black pixel.

Other combinations of lit and dark subpixels appear as single pixels of other colors.

Types of Pixel Defects

Pixel and subpixel defects appear on the screen in different ways.

There are two categories of pixel defects and several types of subpixel defects within each category.

Bright Dot Defects Bright dot defects appear as pixels or subpixels that are always lit or "on".

These are the types of bright dot defects:



One lit red, green or blue subpixel



Two adjacent lit subpixels:

- Red + Blue = Purple
- Red + Green = Yellow
- Green + Blue = Cyan (Light Blue)



Three adjacent lit subpixels
(one white pixel)

Black Dot Defects

Black dot defects appear as pixels or subpixels that are always dark or "off".

These are the types of black dot defects:



One dark subpixel



Two or three adjacent dark subpixels

Proximity of Pixel Defects

Because pixel and subpixels defects of the same type that are nearby one another may be more noticeable, Philips also specifies tolerances for the proximity of pixel defects.

Pixel Defect Tolerances

In order to qualify for repair or replacement due to pixel defects during the warranty period, a TFT LCD panel in a Philips flat panel monitor must have pixel or subpixel defects exceeding the tolerances listed in the following tables.

BRIGHT DOT DEFECTS	ACCEPTABLE LEVEL
MODEL	200WP7
1 lit subpixel	3 or fewer
2 adjacent lit subpixels	1 or fewer
3 adjacent lit subpixels (one white pixel)	0
Distance between two bright dot defects*	25 mm or more
Total bright dot defects of all types	3 or fewer

BLACK DOT DEFECTS	ACCEPTABLE LEVEL
MODEL	200WP7
1 dark subpixel	5 or fewer
2 adjacent dark subpixels	2 or fewer
3 adjacent dark subpixels	1 or fewer
Distance between two black dot defects*	15 mm or more
Total black dot defects of all types	5 or fewer

TOTAL DOT DEFECTS	ACCEPTABLE LEVEL
MODEL	200WP7
Total bright or black dot defects of all types	5 or fewer

Note:

* 1 or 2 adjacent sub pixel defects = 1 dot defect

Your Philips monitor is ISO13406-2 Compliant


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Quick reference for failure mode of LCD panel

this page presents problems that could be made by LCD panel.
It is not necessary to repair circuit board. Simply follow the mechanical instruction on this manual to eliminate failure by replace LCD panel.

Failure description	Phenomenon		
		Polarizer has bubbles	
Vertical block defect		Polarizer has bubbles	
Vertical dim lines			
Vertical lines defect (Always bright or dark)		Foreign material inside polarizer. It shows liner or dot shape.	
Horizontal block defect		Concentric circle formed	
Horizontal dim lines		Bottom back light of LCD is brighter than normal	
Horizontal lines defect (Always bright or dark)		Back light un-uniformity	
Has bright or dark pixel		Backlight has foreign material. Black or white color, liner or circular type	

This page deals with problems that can be corrected by a user. If the problem still persists after you have tried these solutions, contact Philips customer service representative.

Common Problems	
Having this problem	Check these items
No Picture (Power LED not lit)	<ul style="list-style-type: none"> Make sure the power cord is plugged into the power outlet and into the back of the monitor. First, ensure that the power button on the front of the monitor is in the OFF position, then press it to the ON position.
No Picture (Power LED is amber or yellow)	<ul style="list-style-type: none"> Make sure the computer is turned on. Make sure the signal cable is properly connected to your computer. Check to see if the monitor cable has bent pins. The Energy Saving feature may be activated
Screen says 	<ul style="list-style-type: none"> Make sure the monitor cable is properly connected to your computer. (Also refer to the Quick Set-Up Guide). Check to see if the monitor cable has bent pins. Make sure the computer is turned on.
AUTO button not working properly	<ul style="list-style-type: none"> The Auto Function is designed for use on standard Macintosh or IBM-compatible PCs running Microsoft Windows. It may not work properly if using nonstandard PC or video card.
Imaging Problems	
Display position is incorrect	<ul style="list-style-type: none"> Press the Auto button. Adjust the image position using the Phase/Clock of More Settings in OSD Main Controls.
Image vibrates on the screen	Check that the signal cable is properly connected to the graphics board or PC

<p>Vertical flicker appears</p> 	<ul style="list-style-type: none"> • Press the Auto button. • Eliminate the vertical bars using the Phase/Clock of More Settings in OSD Main Controls.
<p>Horizontal flicker appears</p> 	<ul style="list-style-type: none"> • Press the Auto button. • Eliminate the vertical bars using the Phase/Clock of More Settings in OSD Main Controls.
<p>The screen is too bright or too dark</p>	<ul style="list-style-type: none"> • Adjust the contrast and brightness on Monitor Setup. (The backlight of the LCD monitor has a fixed life span. When the screen becomes dark or begins to flicker, please contact your dealer).
<p>An after-image appears</p>	<ul style="list-style-type: none"> • If an image remains on the screen for an extended period of time, it may be imprinted in the screen and leave an after-image. This usually disappears after a few hours
<p>An after-image remains after the power has been turned off.</p>	<ul style="list-style-type: none"> • This is characteristic of liquid crystal and is not caused by a malfunction or deterioration of the liquid crystal. The after-image will disappear after a period of time.
<p>Green, red, blue, dark, and white dots remains</p>	<p>The remaining dots are normal characteristic of the liquid crystal used in today's technology</p>
<p>For further assistance, refer to the Consumer Information Centers list and contact Philips customer service representative</p>	

1.Back view as Fig.1



Fig.1

2.remove the base

-Step 1: Place the monitor face down on a smooth surface as Fig 2.
Be carefully to prevent the scratch and injury during the uninstallation.



Fig.2

Step 2: Unfasten one screw on the base stand as Fig 3.



Fig.3

Step 3: Firmly insert the base removal tool into four-pronged clicks as Fig 4

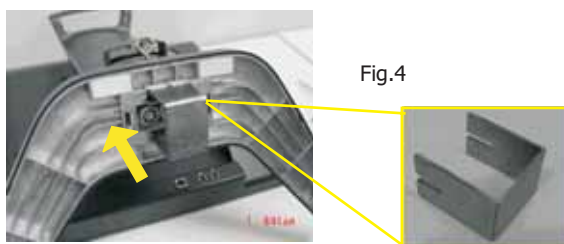


Fig.4

Step 4: Pull out the foot from base as Fig 5 Fig.6.

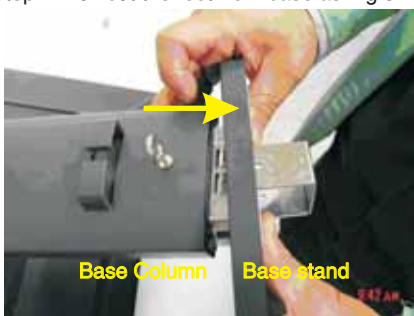


Fig.5



Fig.6

3. Remove cable base as Fig7 and Fig.8



Unscrew the screws

Fig.7



Fig.8

4.Remove back cover as Fig.9 and Fig.10



Fig.9

Unscrew the 2 screws and open the clicks on the sides



Fig.10

5.Remove the shielding

-Unscrew the screws and then pull down the shielding as Fig.11 Fig.12

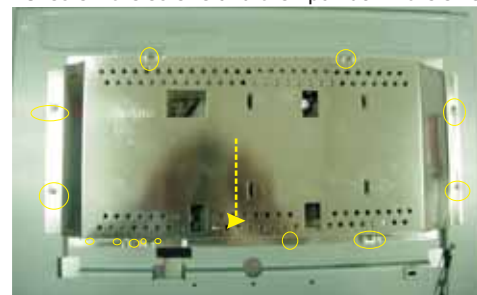


Fig.12

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Fig.11

- 6.Remove the power board and scaler board
-unscrew the screws and disconnect the connectors as Fig.13, Fig.14



Fig.13

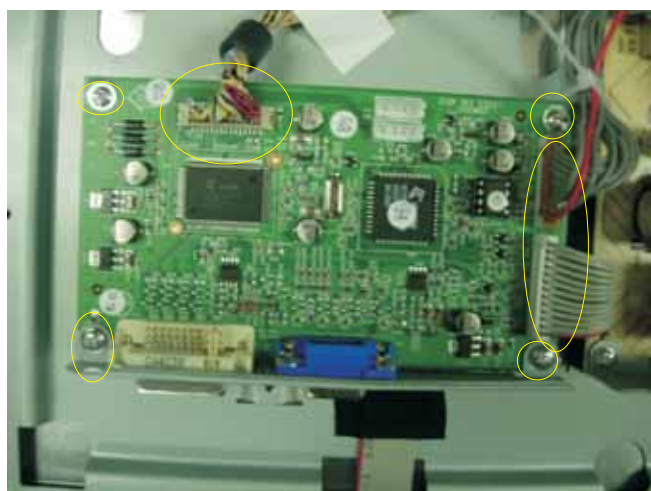


Fig.14

- 7.Remove the USB board
-Disconnect the connector and unscrew the screws as shown in Fig.15



Fig.15

8. Remove the control board
-unscrew the screws and disconnect the connector as Fig.16

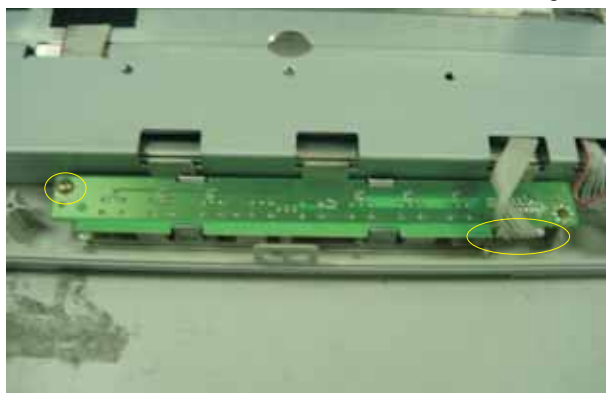
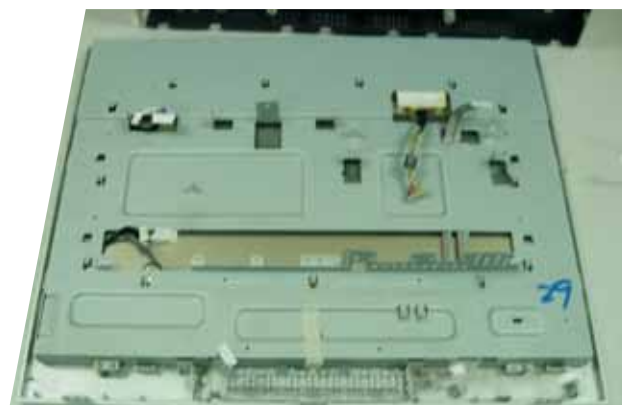


Fig.16



TO access factory mode

1. Turn off monitor(do not turn off PC)
2. Press AUTO , OK and the power simultaneously on the frond control panel, then press OK wait till the OSD menu come on the screen of monitor.

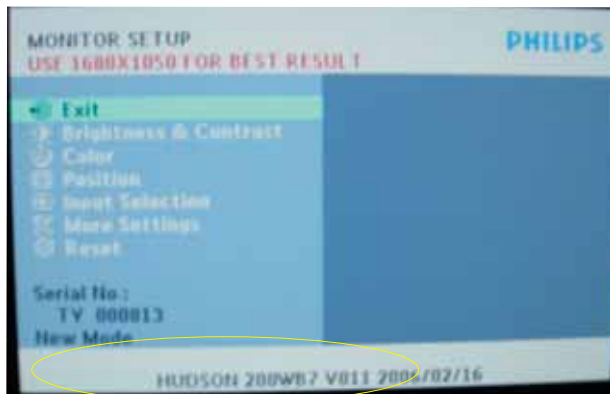


Fig.1

- 3.If OSD menu disappears on the screen of monitor. press OK again(anytime), then the OSD menu comes on the screen again.
4. Use to select OSD menu.
5. Use to access/confirm the selection.

Move the cursor to yellow area (see red circle on Fig.1) press OK button to access to factory mode.(see Fig.2)



Fig.2

PC mode WHITE-D adjustment (B)

- 1 Apply 1280X1024/60Hz mode with 64 gray level pattern as Fig
3. Set main controls brightness control at 100% and contrast to 50% on User mode. Set color setting at original panel color on User mode. Move cursor to "Auto-SUB" item on factory mode, press "OK" key to activate this function.



Fig.3

2. Apply a 1280x1024/60Hz signal with white pattern.Set brightness control at 100% and contrast control at 50%. Adjust the R.G.B gain to reach special color temperature on center of screen.

- 2.1 Aim the probe CA-A30 at the center of screen as Fig. 4
- 2.2 Remove the lens protective cover of probe CA-A30.
- 2.3 Set Measuring/viewing selector to Measuring position for reset analyzer. (Zero calibration) as Fig. 5
- 2.4 Turn on the colour analyzer (CA-110).
- 2.5 Press 0-CAL button to start reset analyzer. See Fig. 6



Fig.4

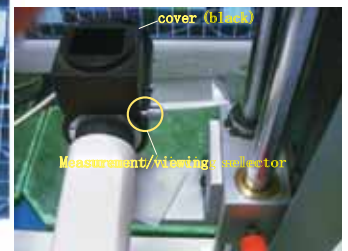


Fig. 5

O-CAL



Fig.6

- 2.6 Switch light probe to Viewing position.
- 2.7 Move the Lens barrel forward or backward to get clear image as shown in Fig. 7
- 2.8 Switch light probe to Measuring position. It should be able to indicate colour value on the CA-110.



Fig.7

[!\[\]\(76571bca9499390beeae0a355d0e74a9_img.jpg\) Go to cover page](#)

2.9 Adjust the R, G, B Sub-Gain on factory mode for the screen center, the 1931 CIE chromaticity (X, Y) co-ordinates shall be as follows.

	9300°K	6500°K
x (center)	0.283 ± 0.005	0.313 ± 0.005
y (center)	0.297 ± 0.005	0.329 ± 0.005

Use Minolta CA-110 for colour coordinates and luminance check.

Luminance is > 250 Nits in the center of the screen when brightness at 100% and contrast set to 100%.

	sRGB
x(center)	0.313 ± 0.008
y(center)	0.329 ± 0.008
Ynits	220 ± 10

Factory Preset (B):

After finished all the adjustment, set:

OSD Default Setting:

Brightness: 100%

Contrast: 50%

Adjust size: Full screen

Language: English

Colour: 6500K

OSD position: middle of the LCD screen

Input Selection: Default as PC VGA (D-sub)

Signal cable: Connect to the monitor for user (VGA)

General

DDC Data Re-programming

In case the DDC data memory IC or main EEPROM which storage all factory settings were replaced due to a defect, the serial numbers have to be re-programmed"Analog DDC IC, & EEPROM".

It is advised to re-soldered DDC IC and main EEPROM from the old board onto the new board if circuit board have been replaced, in this case the DDC data does not need to be re-programmed.

Additional information

Additional information about DDC (Display Data Channel) may be obtained from Video Electronics Standards Association (VESA). Extended Display Identification Data(EDID) information may be also obtained from VESA.

System and equipment requirements

1. An i486 (or above) personal computer or compatible.
2. Microsoft operation system Windows 95/98 .
You have to Install the EDID_PORT_Tool under Win2000/XP . As Fig. 1 .

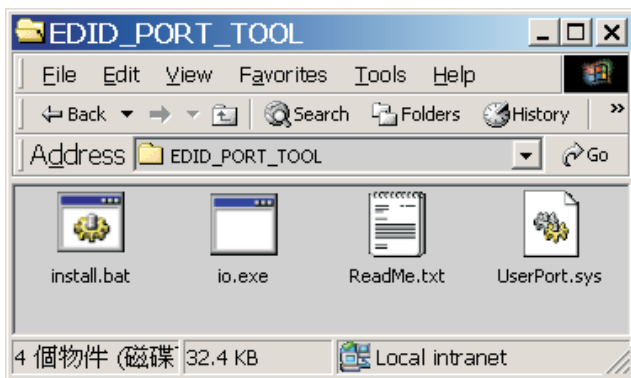


Fig. 1

- A. Copy the "UserPort.sys" to C:\WINNT\system32\drivers(win2000)
C:\WINDOWS\system32\drivers(winXP)
 - B. Running "io.exe" everytime, Before you start to programming edid data .
3. EDID45.1exe program .
 4. DDC 2BI-ISP TOOL:

Inclusion :

- A. DDC2BI-ISP TOOL(3138 106 10396) x1 (as Fig. 2)
- B. Printer cable x1
- c. (D-Sub) to (D-Sub) cable x2
- D. D-SUB to DVI cable X1

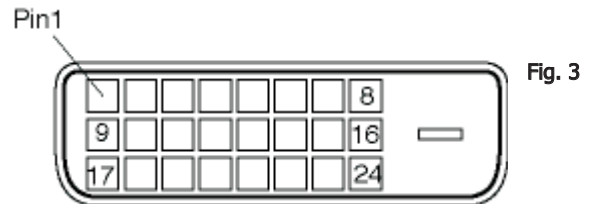
Note: The EDID45.1EXE is a windows-based program, which cannot be run in MS-DOS.



Fig. 2

Pin Assignment

Input DVI-D connector pin assignment



Pin No.	Description
1	TMDS data2-
2	TMDS data2+
3	TMDS data2/4 shield
4	NC
5	NC
6	DDC clock
7	DDC data
8	NC
9	TMDS data1-
10	TMDS data1+
11	TMDS data1/3 shield
12	NC
13	NC
14	+5V
15	Ground (return for +5V and H/Vsync)
16	Hot plug detect
17	TMDS data0-
18	TMDS data0+
19	TMDS data0/5 shield
20	NC
21	NC
22	TMDS clock shield
23	TMDS clock+
24	TMDS clock-

Fig. 4

Input analog D-SUB connector pin assignment

PIN No.	SIGNAL
1	Red
2	Green/ SOG
3	Blue
4	Sense (GND)
5	NC
6	Red GND
7	Green GND
8	Blue GND
9	DDC +5V
10	Cable detect (GND)
11	Sense (GND)
12	Bi-directional data
13	H/H+V sync
14	V-sync
15	Data clock

Fig.5

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Configuration and procedure

There are 3 chips contained OSD string, serial number..etc on the circuit board, main EEPROM which storage all factory settings, OSD string. DDC IC which storage 128byte EDID data(serial number ..etc.). Following descriptions are the connection and procedure for Analog /Digital and main EEPROM can be re-programmed along with Analog/Digital IC by enable factory memory data write function on the DDC program (EDID45.EXE).

Initialize alignment box

In order to avoid that monitor entering power saving mode due to sync will cut off by alignment box, it is necessary to initialize alignment box before running programming software (EDID45.EXE). Following steps show you the procedures and connection.

Step 1: Supply 8-12V DC power source to the Alignment box by plugging a DC power cord or using batteries.

Step 2: Connecting printer cable and D-Sub cable of monitor as Fig. 5

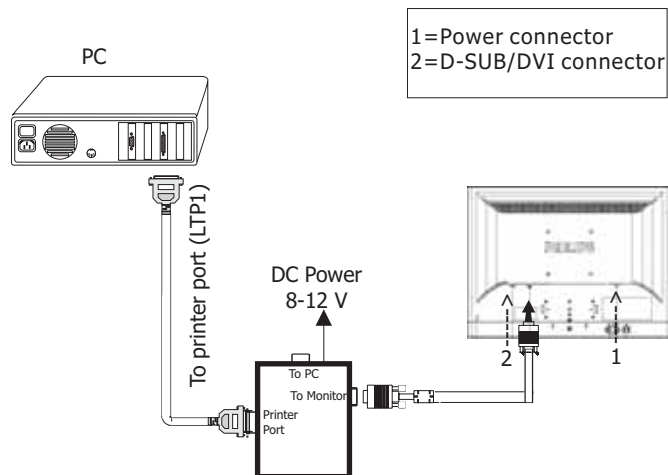


Fig. 5

Step 3: Installation of EDID45.EXE

Method 1: Start on DDC program

Start Microsoft Windows.

1. The Program "EDID45.EXE" in service manual cd-rom be copied to C:\.
2. Click **Start**, choose Run at start menu of Windows as shown In Fig. 6.

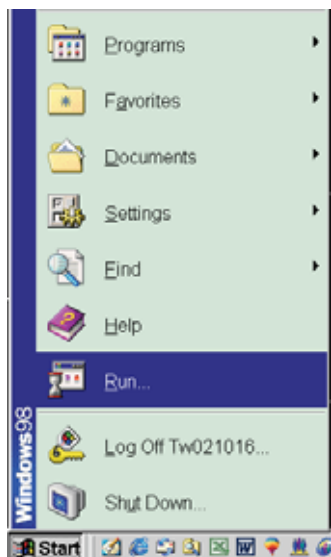


Fig. 6

3. At the submenu, type the letter of your computer's hard disk drive followed by :EDID45 (for example, C:\EDID45, as shown in Fig. 7).

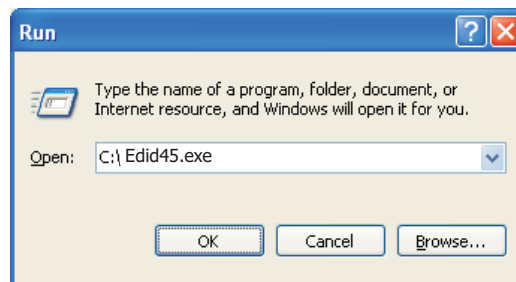


Fig. 7

4. Click OK button. The main menu appears (as shown in Fig. 8). This is for initialize alignment box.

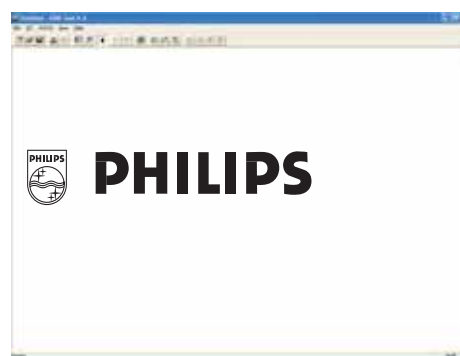


Fig. 8

Note 1: If the connection is improper, you will see the following error message (as shown in Fig. 9) before entering the main menu. Meanwhile, the (read EDID) function will be disable. At this time, please make sure all cables are connected correctly and



Fig. 9

Note 2: During the loading, EDID45 will verify the EDID data which just loaded from monitor before proceed any further function, once the data structure of EDID can not be recognized, the following error message will appear on the screen as below. Please confirm following steps to avoid this message.

1. The data structure of EDID was incorrect.
2. DDC IC that you are trying to load data is empty.
3. Wrong communication channel has set at configuration setup

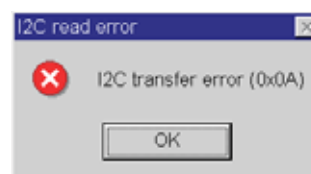


Fig. 10

Re-programming Analog DDC IC

Step 1: After initialize alignment box, connecting all cables and box as shown in Fig. 11

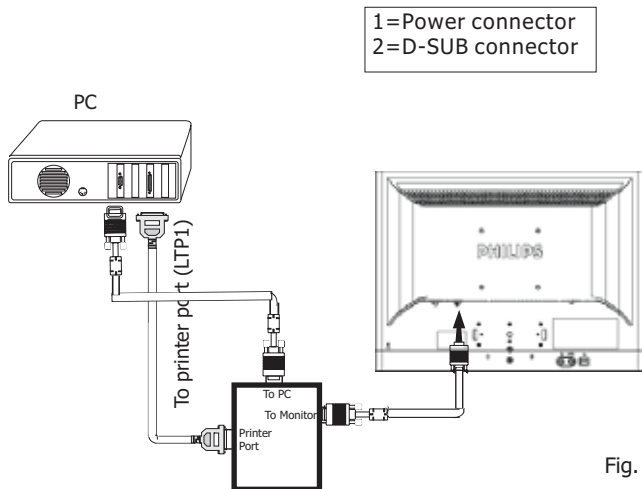


Fig. 11

Step 2: Read DDC data from monitor

- Click icon as shown in Fig. 11 from the tool bar to bring up the Channels "Configuration Setup" windows as shown in Fig. 12.



Fig. 12

- Select the DDC2Bi as the communication channel. As shown in Fig. 13.



Fig. 13

- Click OK button to confirm your selection.
- Click icon (Read EDID function) to read DDC EDID data from monitor. The EDID codes will display on screen as shown in Fig. 14.

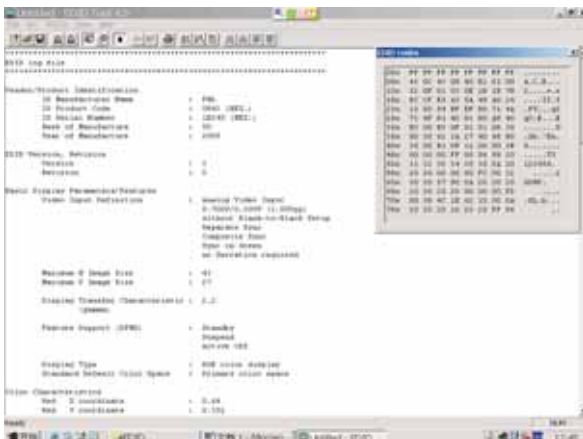


Fig. 14

Step 3: Modify DDC data (verify EDID version, week, year)

- Click (new function) icon from the tool bar, bring up Step 1 of 9 as shown in Fig. 15. EDID45 DDC application provides the function selection and text change (select & fill out) from Step 1 to Step 9.

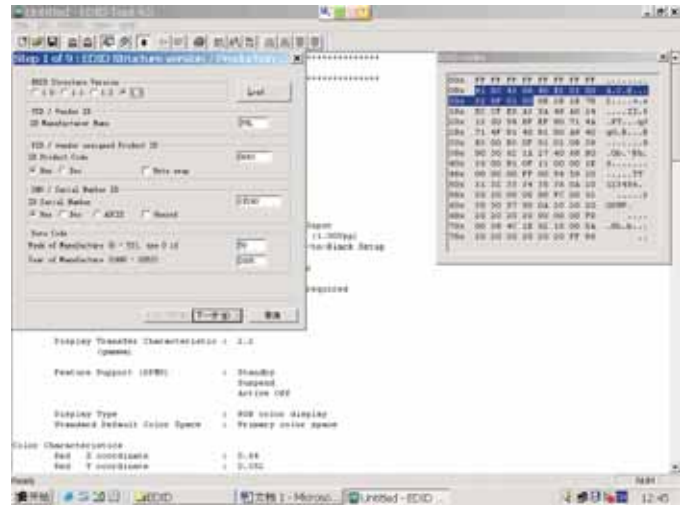


Fig. 15

Step 4: Modify DDC data (Monitor Serial No.)

- Click Next to step7, bring up Fig. 16.
 - Serial number can be filled up or be changed at this moment.
 - Click Finish to exit the Step window.

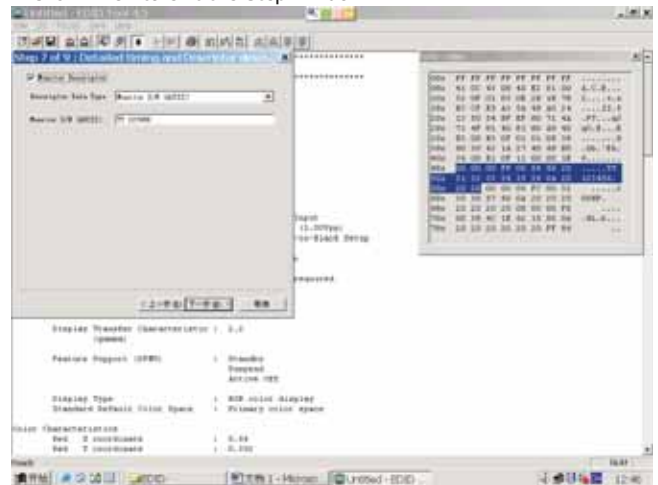


Fig. 16

Step 5: Write DDC data

- Configuration should be as Fig. 17. And press OK.

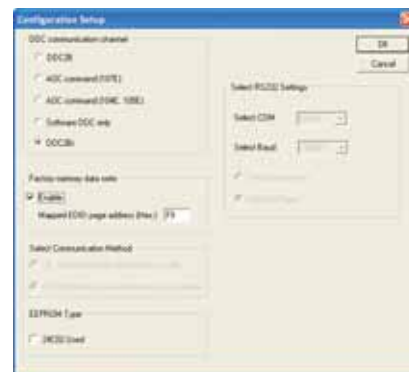



Fig. 17

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2. Access Factory Mode

- Turn off monitor.
- [Push AUTO "AUTO" & OK "OK" buttons at the same time and hold it] + [Press power "Power" button until comes out "Windows screen"] => then release all button

- Click  (Write EDID) icon from the tool bar to write DDC data.

Step 6: Save DDC data

Sometimes, you may need to save DDC data as a text file for using in other IC chip. To save DDC data, follow the steps below:

- Click  (Save) icon (or click "file"-> "save as") from the tool bar And give a file name as shown in Fig. 18. The file type is EDID45 file (*.ddc) which can be open in WordPad. By using WordPad, the texts of DDC data & table (128 bytes, hex code) can be modified. If DDC TEXTS & HEX Table are completely correct, it can be saved as .ddc file to re-load it into DDC IC for DDC Data application.

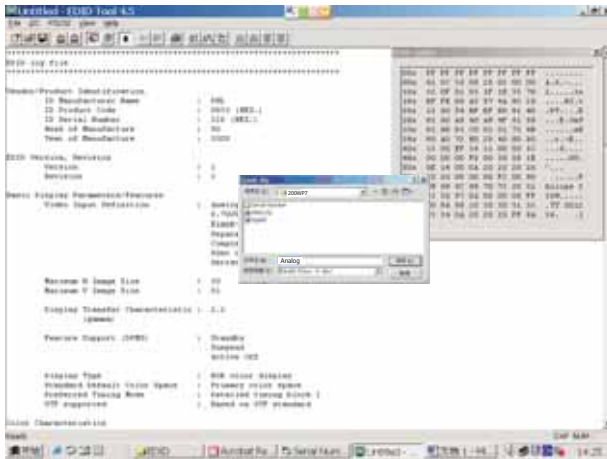


Fig.18

- Click Save.

Step 7: Exit DDC program

Pull down the File menu and select Exit as shown in Fig. 19.

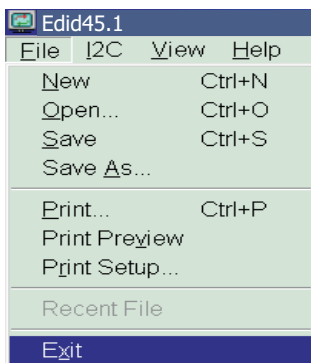


Fig. 19

Step 8: Modify serial number in OSD

- Unzip the serial number.zip to your computer, then open the folder as shown in Fig.20.
- If use Win98 OS, you can execute SN.exe directly. If use Win2000 or XP OS, first, you must execute install.bat, then execute SN.exe
- Set I2C bus (press the left-top button of operating window) as shown in Fig.21, then press "SET" button.
- Set Block2 as shown in Fig.22
- Key in new serial number, then press "Write" button as shown in Fig.22, Click "WRITE" button.
- It will appear "Serial Number Write OK", Click "Enter" to finish it.

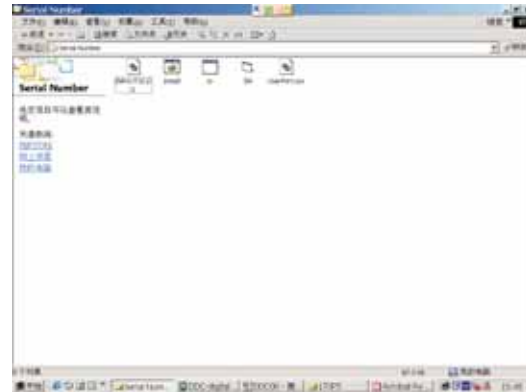


Fig.20



Fig.21

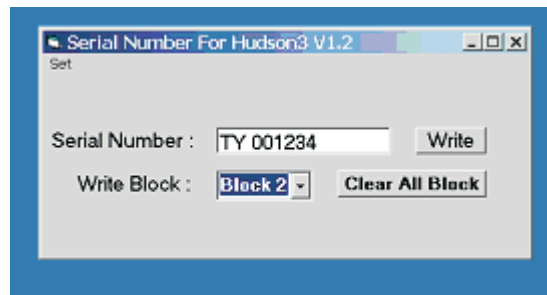


Fig.22

Step9:

- Disconnect the monitor power cord and connect it again.
- Press the OK button to bring up the OSD main manu.
- Re-confirm the serial Number is updated as shown in Fig.23.



Fig.23

Re-programming Digital DDC IC

Step 1: After initialize alignment box, connecting all cables and box as shown in Fig. 24

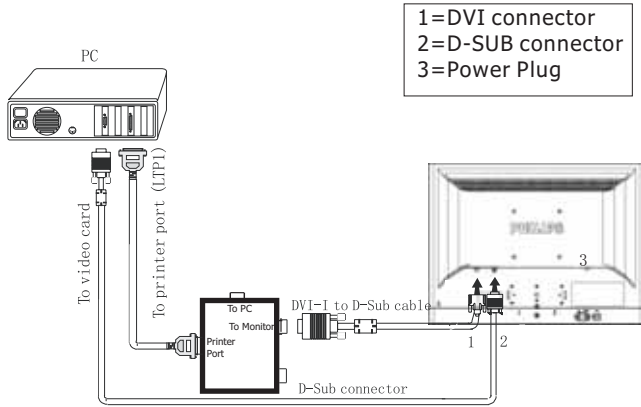


Fig.24

Step 2: Read DDC data from monitor

- Click icon as shown in Fig. 25 from the tool bar to bring up the Channels "Configuration Setup" windows as shown in Fig. 26.



Fig. 25

- Select the DDC2Bi as the communication channel. As shown in Fig. 26.



Fig. 26

- Click OK button to confirm your selection.
- Click icon (Read EDID function) to read DDC EDID data from monitor. The EDID codes will display on screen as shown in Fig. 27.

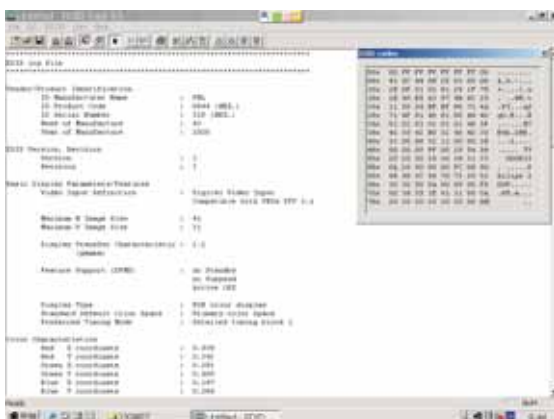


Fig. 27

Step 3: Modify DDC data (verify EDID version, week, year)

- Click (new function) icon from the tool bar, bring up Step 1 of 9 as shown in Fig. 28. EDID45 DDC application provides the function selection and text change (select & fill out) from Step 1 to Step 9.



Fig. 28

Step 4: Modify DDC data (Monitor Serial No.)

- Click Next, bring up Fig. 29. Then select Digital Signal as below

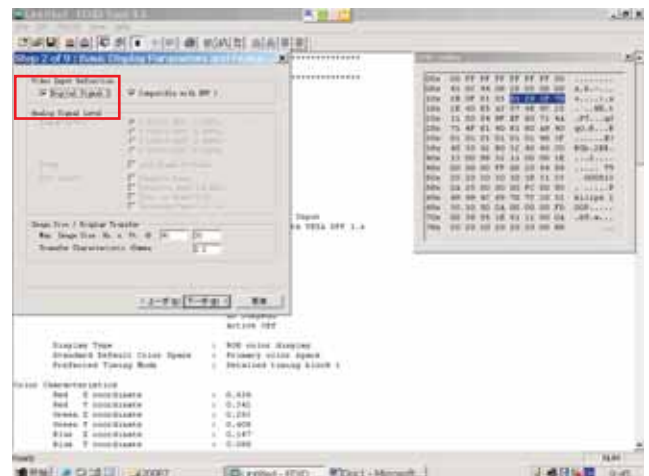


Fig. 29

- Click Next to step7, bring up Fig. 30.
 - Serial number can be filled up or be changed at this moment.
 - Click Finish to exit the Step window.

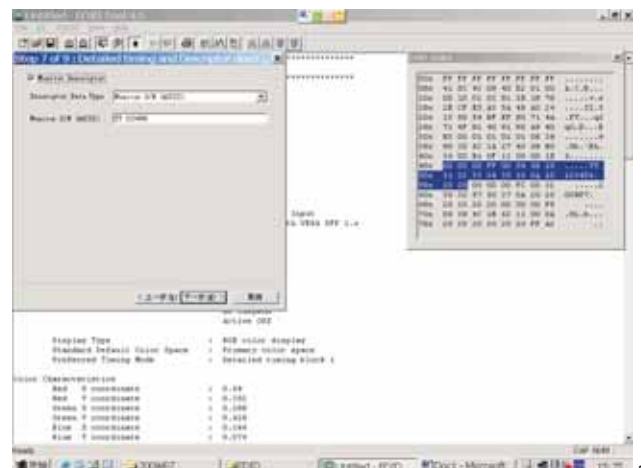


Fig. 30

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- Step 5: Write DDC data
- Configuration should be as Fig. 31. And press OK.

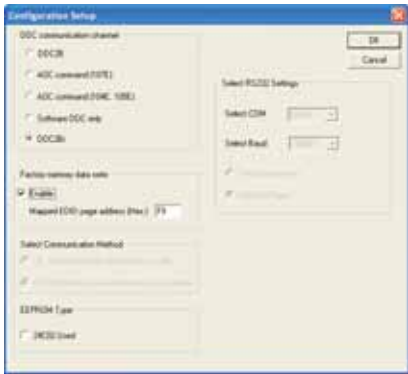




Fig. 31

- Access Factory Mode
 - Turn off monitor.
 - [Push AUTO "AUTO" & OK "OK" buttons at the same time and hold it] + [Press power "Power" button untill comes out "Windows screen"] => then release all button
- Click  (Write EDID) icon from the tool bar to write DDC data.

- Step 6: Save DDC data
- Sometimes, you may need to save DDC data as a text file for using in other IC chip. To save DDC data, follow the steps below:

- Click  (Save) icon (or click "file"-> "save as") from the tool bar And give a file name as shown in Fig. 32. The file type is EDID46 file (*.ddc) which can be open in WordPad. By using WordPad, the texts of DDC data & table (128 bytes, hex code) can be modified. If DDC TEXTS & HEX Table are completely correct, it can be saved as .ddc file to re-load it into DDC IC for DDC Data application.

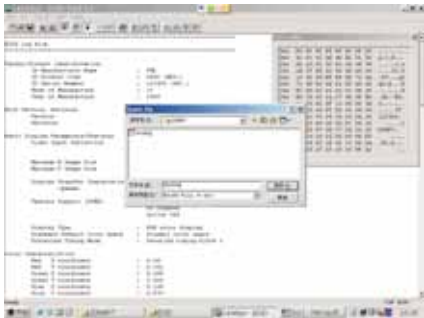


Fig. 32

- Click Save.

- Step 7: Exit DDC program
- Pull down the File menu and select Exit as shown in Fig. 33.

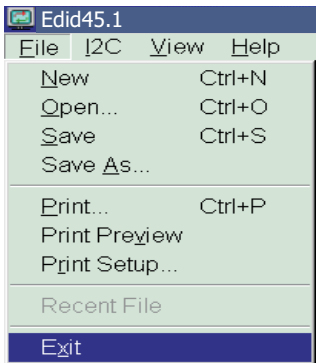
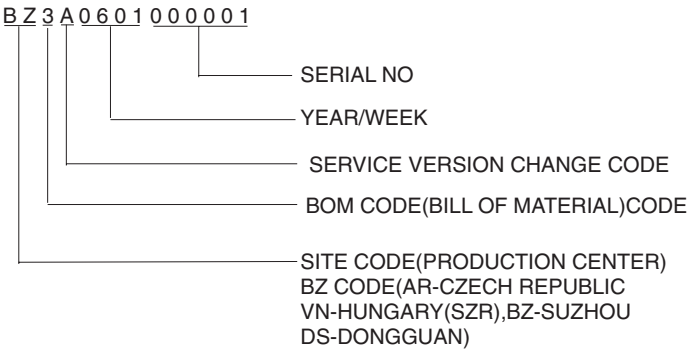


Fig. 33

BOM Code

Panel Supplier	CODE
AUO	1
CPT	2
LPL(LG)	3
QDI	4
CMO	5



THE DISPLAY DATA CHANNEL (DDC 2B) CONTENT INCLUDING
(FOR HUDSON 7-200WP7 Analog AUO panel)

EDID log file for 200WP7 Analog

Vendor/Product Identification

ID Manufacturer Name : PHL
ID Product Code : 0843 (HEX.)
ID Serial Number : 123456 (DEC.)
Week of Manufacture : 50
Year of Manufacture : 2005

EDID Version, Revision

Version : 1
Revision : 3

Basic Display Parameters/Features

Video Input Definition : Analog Video Input
0.700V/0.300V (1.00Vpp)
without Blank-to-Black Setup
Separate Sync
Composite Sync
Sync on Green
no Serration required

Maximum H Image Size : 43
Maximum V Image Size : 27
Display Transfer Characteristic : 2.2
(gamma)

Feature Support (DPMS) : Standby
Suspend
Active Off

Display Type : RGB color display
Standard Default Color Space : Primary color space
Preferred Timing Mode : Detailed timing block 1

Color Characteristics

Red X coordinate : 0.64
Red Y coordinate : 0.352
Green X coordinate : 0.288
Green Y coordinate : 0.628
Blue X coordinate : 0.144
Blue Y coordinate : 0.076
White X coordinate : 0.313
White Y coordinate : 0.329

Established Timings

Established Timings I :
720 x 400 @70Hz (IBM,VGA)
640 x 480 @60Hz (IBM,VGA)
640 x 480 @67Hz (Apple,Mac II)
640 x 480 @72Hz (VESA)
640 x 480 @75Hz (VESA)
800 x 600 @56Hz (VESA)
800 x 600 @60Hz (VESA)

Established Timings II :
800 x 600 @72Hz (VESA)
800 x 600 @75Hz (VESA)
832 x 624 @75Hz (Apple,Mac II)
1024 x 768 @60Hz (VESA)
1024 x 768 @70Hz (VESA)
1024 x 768 @75Hz (VESA)
1280 x 1024 @75Hz (VESA)

Manufacturer's timings : 1152 x 870 @75Hz (Apple,Mac II)

Standard Timing Identification #1

Horizontal active pixels : 1152
Aspect Ratio : 4:3
Refresh Rate : 70

Standard Timing Identification #2

Horizontal active pixels : 1152
Aspect Ratio : 4:3
Refresh Rate : 75

Standard Timing Identification #3

Horizontal active pixels : 1280
Aspect Ratio : 4:3
Refresh Rate : 60

Standard Timing Identification #4

Horizontal active pixels : 1280
Aspect Ratio : 5:4
Refresh Rate : 60

Standard Timing Identification #5

Horizontal active pixels : 1600
Aspect Ratio : 4:3
Refresh Rate : 60

Standard Timing Identification #6

Horizontal active pixels : 1680
Aspect Ratio : 16:10
Refresh Rate : 60

Standard Timing Identification #7

Horizontal active pixels : 1680
Aspect Ratio : 16:10
Refresh Rate : 75

Detailed Timing #1

Pixel Clock (MHz) : 146
H Active (pixels) : 1680
H Blanking (pixels) : 560
V Active (lines) : 1050
V Blanking (lines) : 39
H Sync Offset (F Porch) (pixels): 104
H Sync Pulse Width (pixels) : 176
V Sync Offset (F Porch) (lines) : 3
V Sync Pulse Width (lines) : 6
H Image Size (mm) : 433
V Image Size (mm) : 271
H Border (pixels) : 0
V Border (lines) : 0
Flags : Non-interlaced
: Normal Display, No stereo
: Digital Separate sync.
: Positive Vertical Sync.
: Positive Horizontal Sync.

Monitor Descriptor #2

Serial Number : TY 123456

Monitor Descriptor #3

Monitor Name : Philips 200WP

Monitor Descriptor #4

Monitor Range Limits
Min. Vt rate Hz : 56
Max. Vt rate Hz : 76
Min. Horiz. rate kHz : 30
Max. Horiz. rate kHz : 98
Max. Supported Pixel : 210
No secondary GTF timing formula supported.

Extension Flag

: 0

Check sum

: 6C (HEX.)

EDID data (128 bytes)

0: 00 1: ff 2: ff 3: ff 4: ff 5: ff 6: ff 7: 00
8: 41 9: 0c 10: 43 11: 08 12: 40 13: e2 14: 01 15: 00
16: 32 17: 0f 18: 01 19: 03 20: 1e 21: 2b 22: 1b 23: 78
24: ee 25: cf 26: e5 27: a3 28: 5a 29: 49 30: a0 31: 24
32: 13 33: 50 34: 54 35: bf 36: ef 37: 80 38: 71 39: 4a
40: 71 41: 4f 42: 81 43: 40 44: 81 45: 80 46: a9 47: 40
48: b3 49: 00 50: a9 51: 4f 52: b3 53: 0f 54: 08 55: 39
56: 90 57: 30 58: 62 59: 1a 60: 27 61: 40 62: 68 63: b0
64: 36 65: 00 66: b1 67: 0f 68: 11 69: 00 70: 00 71: 1e
72: 00 73: 00 74: 00 75: ff 76: 00 77: 20 78: 54 79: 59
80: 20 81: 20 82: 31 83: 32 84: 33 85: 34 86: 35 87: 36
88: 0a 89: 20 90: 00 91: 00 92: 00 93: fc 94: 00 95: 50
96: 68 97: 69 98: 6c 99: 69 100: 70 101: 73 102: 20 103: 32
104: 30 105: 30 106: 57 107: 50 108: 00 109: 00 110: 00 111: fd
112: 00 113: 38 114: 4c 115: 1e 116: 62 117: 15 118: 00 119: 0a
120: 20 121: 20 122: 20 123: 20 124: 20 125: 20 126: 00 127: 6c

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THE DISPLAY DATA CHANNEL (DDC 2B) CONTENT INCLUDING (FOR HUDSON7-200WP7 Digital QDI panel)

EDID log file for 200WP7 Digital

Vendor/Product Identification

ID Manufacturer Name : PHL
ID Product Code : 0843 (HEX.)
ID Serial Number : 123456 (DEC.)
Week of Manufacture : 50
Year of Manufacture : 2005

EDID Version, Revision

Version : 1
Revision : 3

Basic Display Parameters/Features

Video Input Definition : Digital Video Input
Compatible with VESA DFP 1.x
Maximum H Image Size : 43
Maximum V Image Size : 27
Display Transfer Characteristic : 2.2
(gamma)
Feature Support (DPMS) : no Standby
no Suspend
Active Off

Display Type : RGB color display
Standard Default Color Space : Primary color space
Preferred Timing Mode : Detailed timing block 1

Color Characteristics

Red X coordinate : 0.64
Red Y coordinate : 0.352
Green X coordinate : 0.288
Green Y coordinate : 0.628
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Blue Y coordinate : 0.076
White X coordinate : 0.313
White Y coordinate : 0.329

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Established Timings I : 720 x 400 @70Hz (IBM,VGA)
640 x 480 @60Hz (IBM,VGA)
640 x 480 @67Hz (Apple,Mac II)
640 x 480 @72Hz (VESA)
640 x 480 @75Hz (VESA)
800 x 600 @56Hz (VESA)
800 x 600 @60Hz (VESA)

Established Timings II : 800 x 600 @72Hz (VESA)
800 x 600 @75Hz (VESA)
832 x 624 @75Hz (Apple,Mac II)
1024 x 768 @60Hz (VESA)
1024 x 768 @70Hz (VESA)
1024 x 768 @75Hz (VESA)
1280 x 1024 @75Hz (VESA)

Manufacturer's timings : 1152 x 870 @75Hz (Apple,Mac II)

Standard Timing Identification #1

Horizontal active pixels : 1152
Aspect Ratio : 4:3
Refresh Rate : 70

Standard Timing Identification #2

Horizontal active pixels : 1152
Aspect Ratio : 4:3
Refresh Rate : 75

Standard Timing Identification #3

Horizontal active pixels : 1280
Aspect Ratio : 4:3
Refresh Rate : 60

Standard Timing Identification #4

Horizontal active pixels : 1280

Aspect Ratio : 5:4

Refresh Rate : 60

Standard Timing Identification #5

Horizontal active pixels : 1600
Aspect Ratio : 4:3
Refresh Rate : 60

Standard Timing Identification #6

Horizontal active pixels : 1680
Aspect Ratio : 16:10
Refresh Rate : 60

Detailed Timing #1

Pixel Clock (MHz) : 146
H Active (pixels) : 1680
H Blanking (pixels) : 560
V Active (lines) : 1050
V Blanking (lines) : 39
H Sync Offset (F Porch) (pixels): 104
H Sync Pulse Width (pixels) : 176
V Sync Offset (F Porch) (lines) : 3
V Sync Pulse Width (lines) : 6
H Image Size (mm) : 433
V Image Size (mm) : 271
H Border (pixels) : 0
V Border (lines) : 0
Flags : Non-interlaced
: Normal Display, No stereo
: Digital Separate sync.
: Positive Vertical Sync.
: Positive Horizontal Sync.

Monitor Descriptor #2

Serial Number : TY 123456

Monitor Descriptor #3

Monitor Name : Philips 200WP

Monitor Descriptor #4

Monitor Range Limits
Min. Vt rate Hz : 56
Max. Vt rate Hz : 76
Min. Horiz. rate kHz : 30
Max. Horiz. rate kHz : 98
Max. Supported Pixel : 170
No secondary GTF timing formula supported.

Extension Flag

: 0

Check sum

: 83 (HEX.)

EDID data (128 bytes)

0: 00 1: ff 2: ff 3: ff 4: ff 5: ff 6: ff 7: 00
8: 41 9: 0c 10: 43 11: 08 12: 40 13: e2 14: 01 15: 00
16: 32 17: 0f 18: 01 19: 03 20: 81 21: 2b 22: 1b 23: 78
24: 2e 25: cf 26: e5 27: a3 28: 5a 29: 49 30: a0 31: 24
32: 13 33: 50 34: 54 35: bf 36: ef 37: 80 38: 71 39: 4a
40: 71 41: 4f 42: 81 43: 40 44: 81 45: 80 46: a9 47: 40
48: b3 49: 00 50: 01 51: 01 52: 01 53: 01 54: 08 55: 39
56: 90 57: 30 58: 62 59: 1a 60: 27 61: 40 62: 68 63: b0
64: 36 65: 00 66: b1 67: 0f 68: 11 69: 00 70: 00 71: 1e
72: 00 73: 00 74: 00 75: ff 76: 00 77: 20 78: 54 79: 59
80: 20 81: 20 82: 31 83: 32 84: 33 85: 34 86: 35 87: 36
88: 0a 89: 20 90: 00 91: 00 92: 00 93: fc 94: 00 95: 50
96: 68 97: 69 98: 6c 99: 69 100: 70 101: 73 102: 20 103: 32
104: 30 105: 30 106: 57 107: 50 108: 00 109: 00 110: 00 111: fd
112: 00 113: 38 114: 4c 115: 1e 116: 62 117: 11 118: 00 119: 0a
120: 20 121: 20 122: 20 123: 20 124: 20 125: 20 126: 00 127: 83

Configuration and procedure

"Easywriter " The software is provided by Novatek to upgrade the firmware of CPU.

It is a windows-based program, which cannot be run in MS-DOS.

The tool (3138 106 10396) is for the interface between "Parallel Port of PC" and "15 pin-D-SUB connector of Monitor".

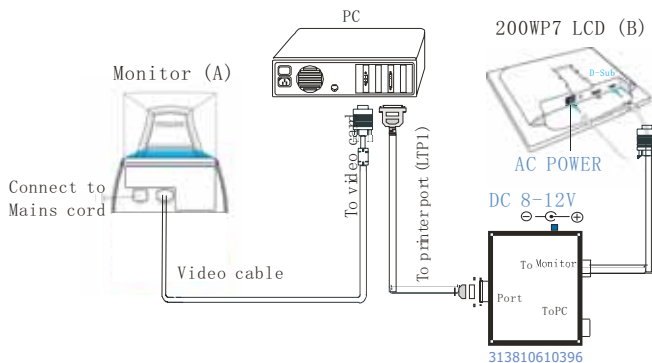
System and equipment requirements

1. An i486 (or above) personal computer or compatible.
2. Microsoft operation system Windows 95/98/2000/XP.
3. ISP Software " Easywrite "
4. ISP TOOL (3138 106 10396) as shown in Fig. 1



Fig. 1

5. Connect ISP TOOL and Mains cord to Monitor as shown in Fig. 2.



6. Run the Easywriter program

Step 1 : Make a folder in your PC as shown in Fig. 3.

For example : C:\easywrite

Step 2 : Copy ISP Software Easywriter.zip into your folder as shown in Fig.3.

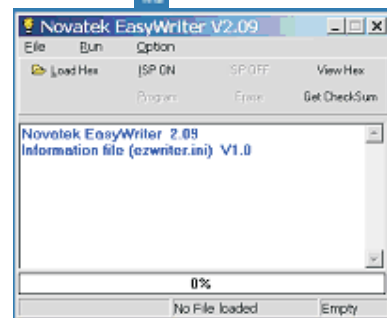
Step 3 : Unzip Easywriter.zip into your folder as shown in Fig. 3.

Step 4 : Double click the EasywriterV2.09.exe icon to run the Application as Fig. 4.



Double click the shortcut  on the desktop

Fig. 4



Step 5 :Copy the .hex code to C:\200WP7 as shown in Fig. 5 .



Fig. 5

Update the firmware

1. Press the load hex then select the .hex code as shown in Fig.6

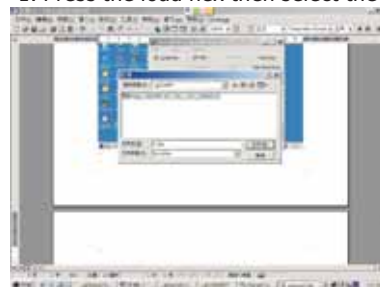


Fig. 6

2. Press the AUTO to run the program,the firmware be updated as shown in Fig7` Fig.8

Fig. 7

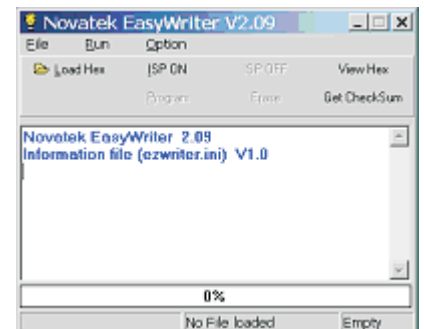
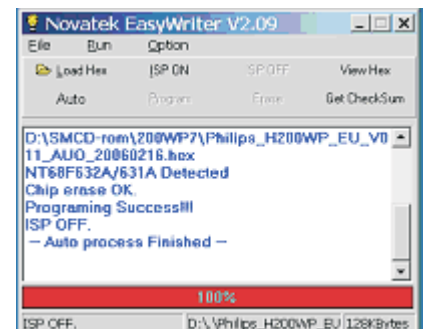


Fig.8



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Press the file— exit to end program, as shown in Fig.9

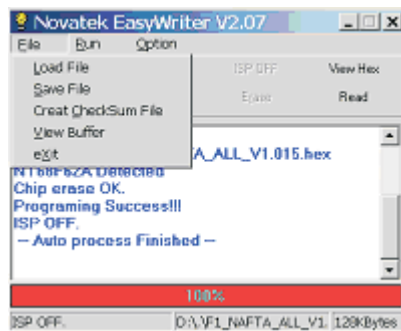
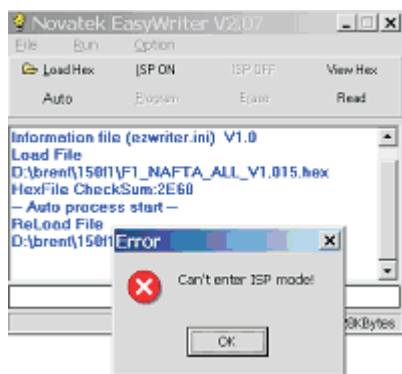


Fig.9

If there is a warning message coming as shown in Fig 10. , you have to check the AC power, Video cable, or Novatek MCU.



You can enter factory mode to confirm the CPU version



1. General points
 - 1.1 During the test and measuring, supply a distortion free AC mains voltage to the apparatus via an isolated transformer with low internal resistance.
 - 1.2 All measurements mentioned hereafter are carried out at a Normal mains voltage (90 - 132 VAC for USA version, 195 -264 VAC for EUROPEAN version, or 90 - 264 VAC for the model with full range power supply, unless otherwise stated.)
 - 1.3 All voltages are to be measured or applied with respect to ground, unless otherwise stated.
Note: don't use heat-sink as ground.
 - 1.4 The test has to be done on a complete set including LCD panel in a room with temperature of 25 +/- 5 degree C.
 - 1.5 All values mentioned in these test instruction are only applicable of a well aligned apparatus, with correct signal.
 - 1.6 The letters symbols (B) and (S) placed behind the test instruction denotes
(B): carried out 100% inspection at assembly line
(S): carried out test by sampling
 - 1.7 The white balance (color temperature), has to be tested in subdued lighted room.
 - 1.8 Repetitive power on/ off cycle are allowed. The image can be displayed after 8 sec.
 - 1.9 All optical characteristics (including WHITE-D, Brightness, and so on) are determined according to panel specification after warming up approximate 30 minutes that brightness stability is optimal, and follow strictly after panel specification.

2. Input signal

Signal type

- 2.1.1 Analogue Video: 0.7 Vp-p linear, positive polarity
Sync. : TTL level, separate, positive or negative polarity
Signal source: pattern generator format as the SPEC.
Reference generator: QuantumData 802G/ 802BT

- 2.1.2 Digital Video: 600mVp-p TMDs Signal

- 2.1.3 Audio Signal: PC line in

2.2 Input signal mode

(1) Factory Preset Modes (15modes)

Item	H.Freq. (KHz)	Mode	Resolution	V.Freq. (Hz)
1	31.469	IBM VGA 10H	640x350	70.086
2	31.469	IBM VGA 3H	720x400	70.087
3	31.469	IBM VGA 12H	640x480	59.940
4	35.000	MACINTOSH	640x480	67.000
5	37.500	VESA	640x480	75.000
6	35.156	VESA	800x600	56.250
7	37.879	VESA	800x600	60.317
8	46.875	VESA	800x600	75.000

Item	H.Freq. (KHz)	Mode	Resolution	V.Freq. (Hz)
9	48.363	VESA	1024x768	60.004
10	60.023	VESA	1024x768	75.029
11	68.700	MACINTOSH	1152x870	75.000
12	63.981	VESA	1280x1024	60.020
13	79.976	VESA	1280x1024	75.025
14	75.0	VESA	1600x1200	60
15	65.29	-	1680x1050	60.0

Preset Modes (40modes)

Item	H.Freq. (KHz)	Mode	Resolution	V.Freq. (Hz)
1	31.469	IBM VGA 10H	640x350	70.086
2	31.469	IBM VGA 3H	720x400	70.087
3	31.469	IBM VGA 12H	640x480	59.940
4	35.000	MACINTOSH	640x480	67.000
5	37.861	VESA	640x480	72.809
6	37.500	VESA	640x480	75.000
7	43.269	VESA	640x480	85.008
8	35.156	VESA	800x600	56.250
9	37.879	VESA	800x600	60.317
10	48.077	VESA	800x600	72.188
11	46.875	VESA	800x600	75.000
12	53.674	VESA	800x600	85.061
13	49.700	MACINTOSH	832x624	75.000
14	56.4	-	960x720	75
15	44.75	-	960x720	60
16	48.363	VESA	1024x768	60.004
17	56.476	VESA	1024x768	70.069
18	60.023	VESA	1024x768	75.029
19	61.080	IBM XGA-2	1024x768	75.781
20	68.677	VESA	1024x768	84.997
21	47.776	CVT 2.3MA	1280 x768	60

Item	H.Freq. (KHz)	Mode	Resolution	V.Freq. (Hz)
22	60.289	CVT 2.3MA	1280 x768	75
23	54.1		1152x864	60
24	63.851	VESA	1152x864	70.012

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25	67.500	VESA	1152x864	75.000
26	68.700	MACINTOSH	1152x870	75.000
27	61.845	SUN WS	1152x900	66.004
28	71.810	SUN WS	1152x900	76.150
29	60.000	VESA	1280x960	60.000
30	75.000	VESA	1280x960	75.000
31	63.981	VESA	1280x1024	60.020
32	71.691	SUN WS	1280x1024	67.189
33	76.000	DOS/V	1280x1024	72.000
34	79.976	VESA	1280x1024	75.025
35	81.130	SUN WS	1280x1024	76.110
36	91.1	VESA	1280x1024	85.0
37	78.36	CVT 2.3MA	1600x1000	75.0 (for D-Sub)
38	75.0	VESA	1600x1200	60.0
39	65.29	VESA	1680*1050	59.883
40	82.306	VESA	1680*1050	74.892
41				
42				

	sRGB
x(center)	0.313 ± 0.008
y(center)	0.329 ± 0.008
Ynits	220 ± 10

3. AC, DC power board

3.1 Setup the AC I/P at 90VAC, and Output **DC 12V loading 1.1A (AU 0.6A)**, the DC output voltage is 12.0 +/-0.6 V DC, Adjusting is no need. and 5V loading **1.0A(AU 2.7A)**, the DC output voltage is 5V+/-0.25VDC. (B)

4. Display Adjustment

4.1 Access to factory mode (IIC) in auto-alignment system

The communication protocol switch to IIC.

4.2 Auto color adjustment (B)

Apply a 1280x1024/60Hz signal with Black and white levels pattern, set brightness control at 100%, and contrast control at 50%.

Adjust the R, G, B offset, and gain to calibrate the color smoothly and 64-gray level distinguishable.

Check all factory pre-setting modes.

4.3 Adjustment of WHITE-D (B)

Apply a 1280*1024 / 60Hz signal with white pattern, set brightness control at 100%, and contrast control at 50%.

Adjust the R, G, B Sub-Gain, for the screen

center, the 1931 CIE chromaticity (X, Y) co-ordinates shall be;

	9300°K	6500°K
x (center)	0.283 ± 0.005	0.313 ± 0.005
y (center)	0.297 ± 0.005	0.329 ± 0.005

Use Minolta CA-110 for colour coordinates and luminance check.

Luminance is > 240 Nits in the center of the screen when brightness at 100% and contrast set to 100%.

4.4 Adjustment of sRGB

Apply a 1280*1024 / 60Hz signal with white pattern, set brightness control at 100%, and contrast control at 50%. Adjust the R, G, B Sub-Gain, for the screen center, the 1931 CIE chromaticity (X, Y) co-ordinates shall be;

0. Warning

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically. When repairing, make sure that you are connected with the same potential as the mass of the unit via a wrist wrap with resistance. Keep components and tools also at the same potential !

1. Servicing of SMDs (Surface Mounted Devices)

1.1 General cautions on handling and storage

- Oxidation on the terminals of SMDs results in poor soldering.

Do not handle SMDs with bare hands.

- Avoid using storage places that are sensitive to oxidation such as places with sulphur or chlorine gas, direct sunlight, high temperatures or a high degree of humidity. The capacitance or resistance value of the SMDs may be affected by this.

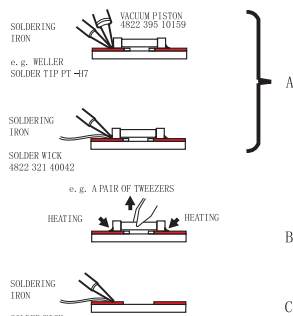
- Rough handling of circuit boards containing SMDs may cause damage to the components as well as the circuit boards. Circuit boards containing SMDs should never be bent or flexed. Different circuit board materials expand and contract at different rates when heated or cooled and the components and/or solder connections may be damaged due to the stress. Never rub or scrape chip components as this may cause the value of the component to change. Similarly, do not slide the circuit board across any surface.

1.2 Removal of SMDs

- Heat the solder (for 2-3 seconds) at each terminal of the chip. By means of litz wire and a slight horizontal force, small components can be removed with the soldering iron. They can also be removed with a solder sucker (see Fig. 1A).

Fig. 1 DISMOUNTING

1A)



While holding the SMD with a pair of tweezers, take it off gently using the soldering iron's heat applied to each terminal (see Fig. 1 B).

- Remove the excess solder on the solder lands by means of litz wire or a solder sucker (see Fig. 1 C).

1.3 Caution on removal

- When handling the soldering iron, use suitable pressure and be careful.
- When removing the chip, do not use undue force with the pair of tweezers.
- The soldering iron to be used (approx. 30 W) should

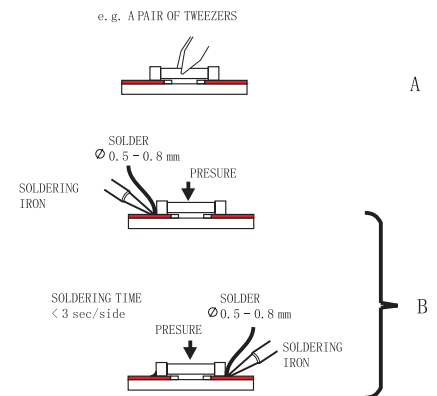
preferably be equipped with a thermal control (soldering temperature: 225 to 250 C).

- The chip, once removed, must never be reused.

1.4 Attachment of SMDs

- Locate the SMD on the solder lands by means of tweezers and solder the component on one side. Ensure that the component is positioned correctly on the solder lands (see Fig.2A).
- Next complete the soldering of the terminals of the component (see Fig. 2B).

Fig. 2 MOUNTING



2. Caution when attaching SMDs

- When soldering the SMD terminals, do not touch them directly with the soldering iron. The soldering should be done as quickly as possible, care must be taken to avoid damage to the terminals of the SMDs themselves.
- Keep the SMD's body in contact with the printed board when soldering.
- The soldering iron to be used (approx. 30 W) should preferably be equipped with a thermal control (soldering temperature: 225 to 250 C).
- Soldering should not be done outside the solder land.
- Soldering flux (of rosin) may be used, but should not be acidic.
- After soldering, let the SMD cool down gradually at room temperature.
- The quantity of solder must be proportional to the size of the solder land. If the quantity is too great, the SMD might crack or the solder lands might be torn loose from the printed board (see Fig. 3).

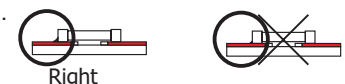
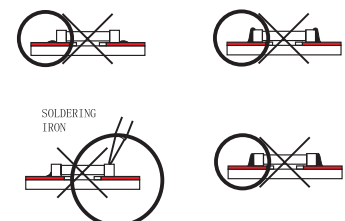


Fig.3 Examples



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3. Lead-free product identification

You can identify lead-free product by Philips-lead-free logo on PCB.



4. Lead-free product repair instruction

4.1 Use only lead-free Solder Alloy 0622 149 00106(1.2mm SAC305) or 0622 149 00108(1.0mm SAC305).

Remark: For lead free soldering material, please visit www.alphametals.com website for details. This is recommended by Philips.

4.2 Use only adequate solder tools applicable for lead-free soldering-tin. The solder tool must be able to reach at least a solder-temperature of 400°C, to stabilize the adjusted temperature at the solder-tip and to exchange solder-tips for different applications.

Small Passives/Actives to be removed with thermal tweezers

Automated system for IC and BGA repair (Microscope, Camera, Beam split optics, Computer, Programmer, Heat controllers, Vacuum system, Laser pointer)

Solder Hand-Tool (Adjustable in temperature height, Temperature shall be held constant, Flexible tips)

4.3 Adjust your solder tool so that a temperature around 360°C-380°C is reached and stabilized at the solder joint.

Heating-time of the solder-joint should not exceed ~ 4 sec. Avoid temperatures above 400°C otherwise wear-out of tips will rise drastically and flux-fluid will be destroyed.

Corrosion of Tool-Spikes can be avoided when using SAC305 and a temperature of less than 400°C.

4.4 Mix of lead-free solder-tin/parts with leaded soldering-tin/parts is possible but not recommended. If not to avoid clean carefully the solder-joint from old tin and re-solder with new tin.

4.5 Use only original spare-parts listed in the Service-Manuals. Standard-material (consumables) can also be purchased at external companies.

4.6 Special information for lead-free BGA-ICs: this ICs will be delivered in so-called dry-packaging to protect the IC against moisture and with lead-free logo on it. This packaging may only be opened shortly before it is used (soldered). Otherwise the body of the IC gets "wet" inside and during the heating time the structure of the IC will be destroyed due to high (steam-)pressure. If the packaging was opened before usage the IC has to be heated up for some hours (around 90°C) for drying (Take attention for ESD-protection!)

5. Rework on BGA (Ball Grid Array) ICs

General

Although (LF)BGA assembly yields are very high, there may still be a requirement for component rework. By rework, we mean the process of removing the component from the PWB and replacing it with a new component. If an (LF)BGA is removed from a PWB, the solder balls of the component are deformed drastically so the removed (LF)BGA has to be discarded.

Device Removal

As is the case with any component that, it is essential when removing an (LF)BGA, the board, tracks, solder lands, or surrounding components are not damaged. To remove an (LF)BGA, the board must be uniformly heated to a temperature close to the reflow soldering temperature. A uniform temperature reduces the chance of warping the PWB.

To do this, we recommend that the board is heated until it is certain that all the joints are molten. Then carefully pull the component off the board with a vacuum nozzle. For the appropriate temperature profiles, see the IC data sheet.

Area Preparation

When the component has been removed, the vacant IC area must be cleaned before replacing the (LF)BGA.

Removing an IC often leaves varying amounts of solder on the mounting lands. This excessive solder can be removed with either a solder sucker or solder wick. The remaining flux can be removed with a brush and cleaning agent. After the board is properly cleaned and inspected, apply flux on the solder lands and on the connection balls of the (LF)BGA

Note: Do not apply solder paste, as this has shown to result in problems during re-soldering.

Device Replacement

The last step in the repair process is to solder the new component on the board. Ideally, the (LF)BGA should be aligned under a microscope or magnifying glass. If this is not possible, try to align the (LF)BGA with any board markers.

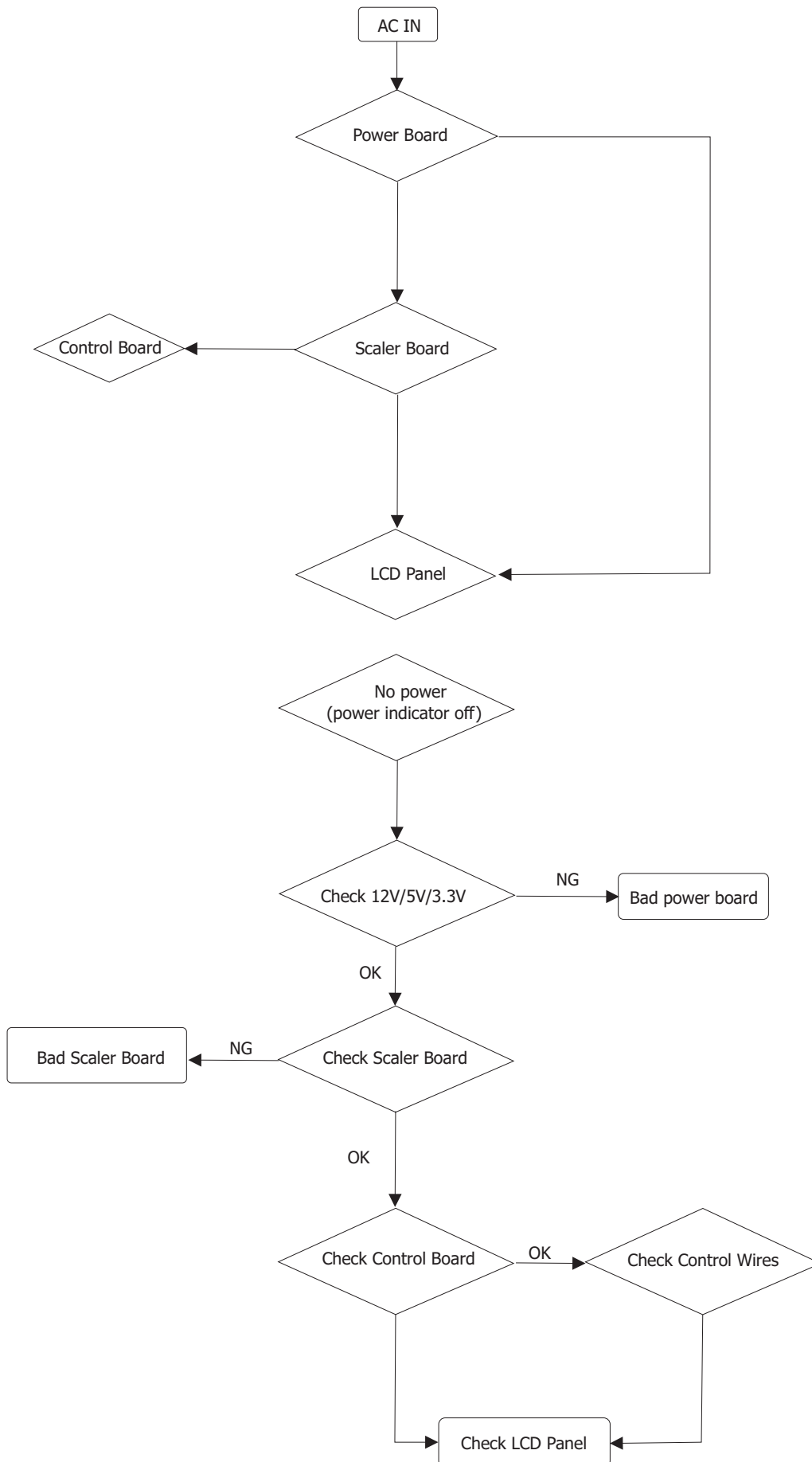
To reflow the solder, apply a temperature profile according to the IC data sheet. So as not to damage neighbouring components, it may be necessary to reduce some temperatures and times.

More Information

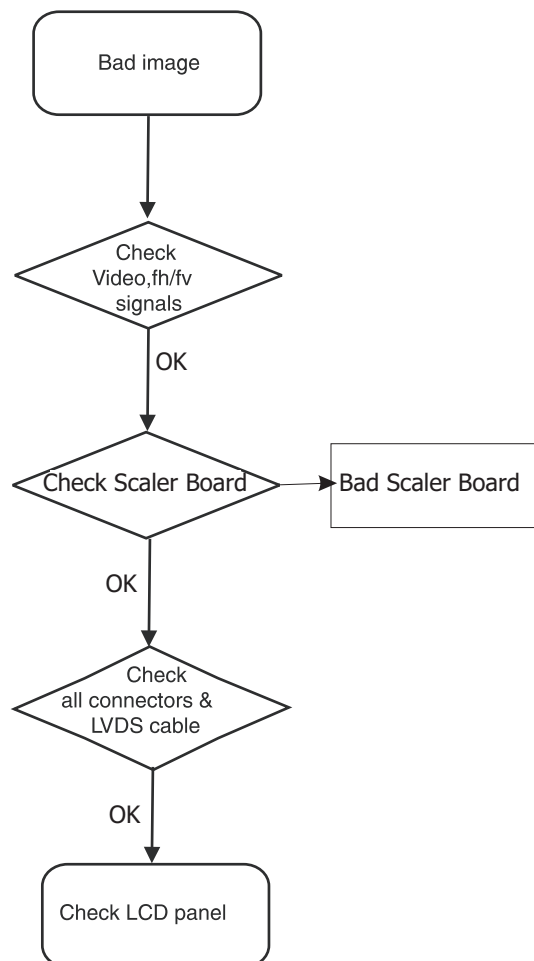
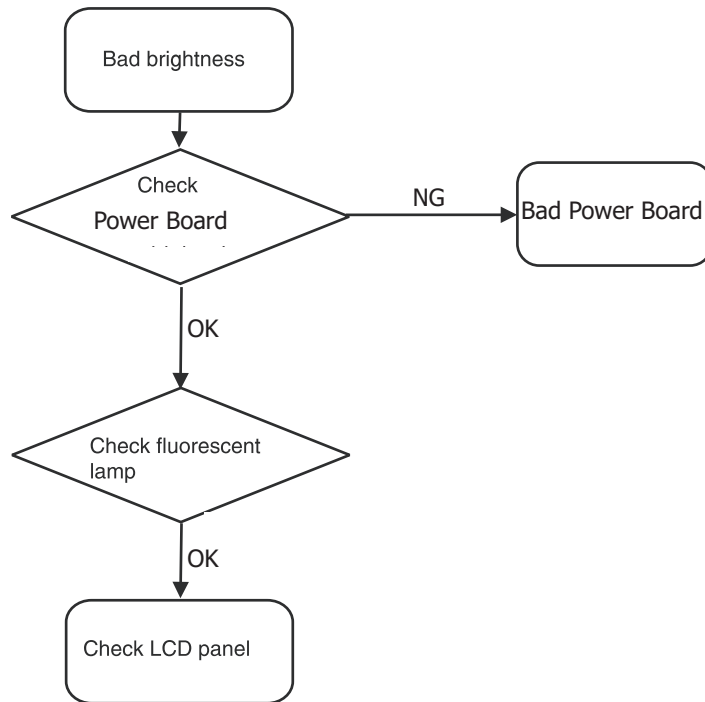
For more information on how to handle BGA devices, visit this URL: <http://www.atyourservice.ce.philips.com> (needs subscription). After login, select "Magazine", then go to "Workshop Information". Here you will find Information on how to deal with BGA-ICs.

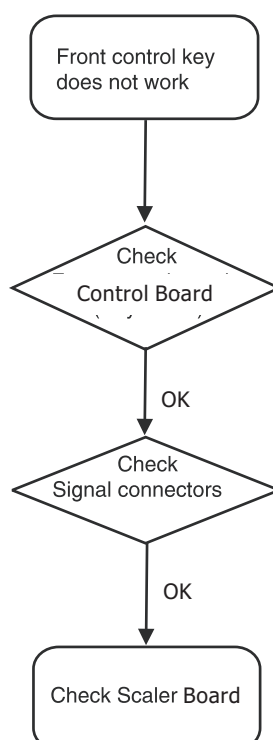
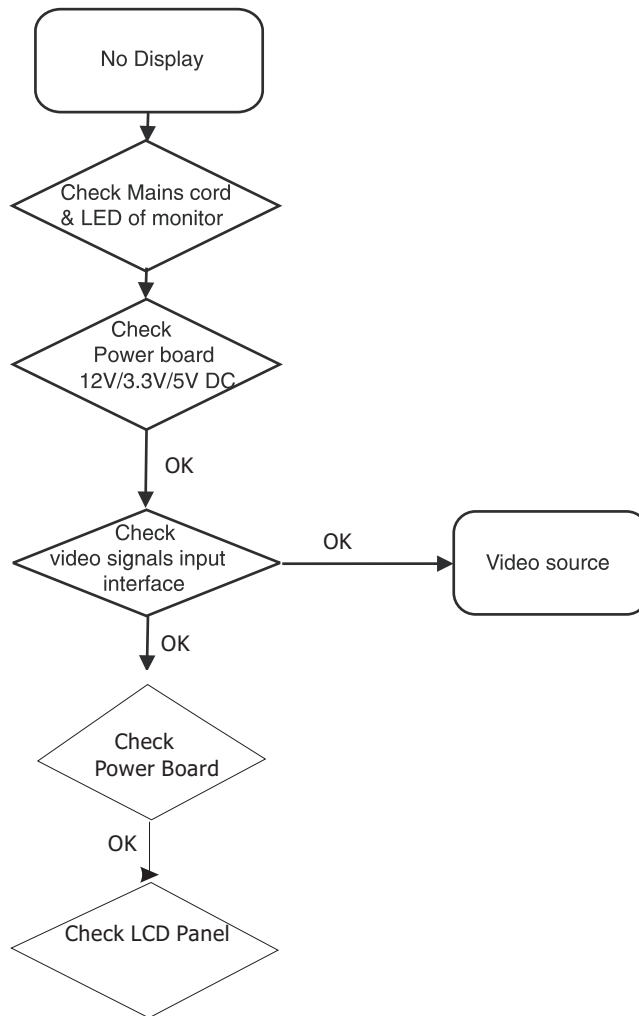
Repair Flow Chart

Go to cover page

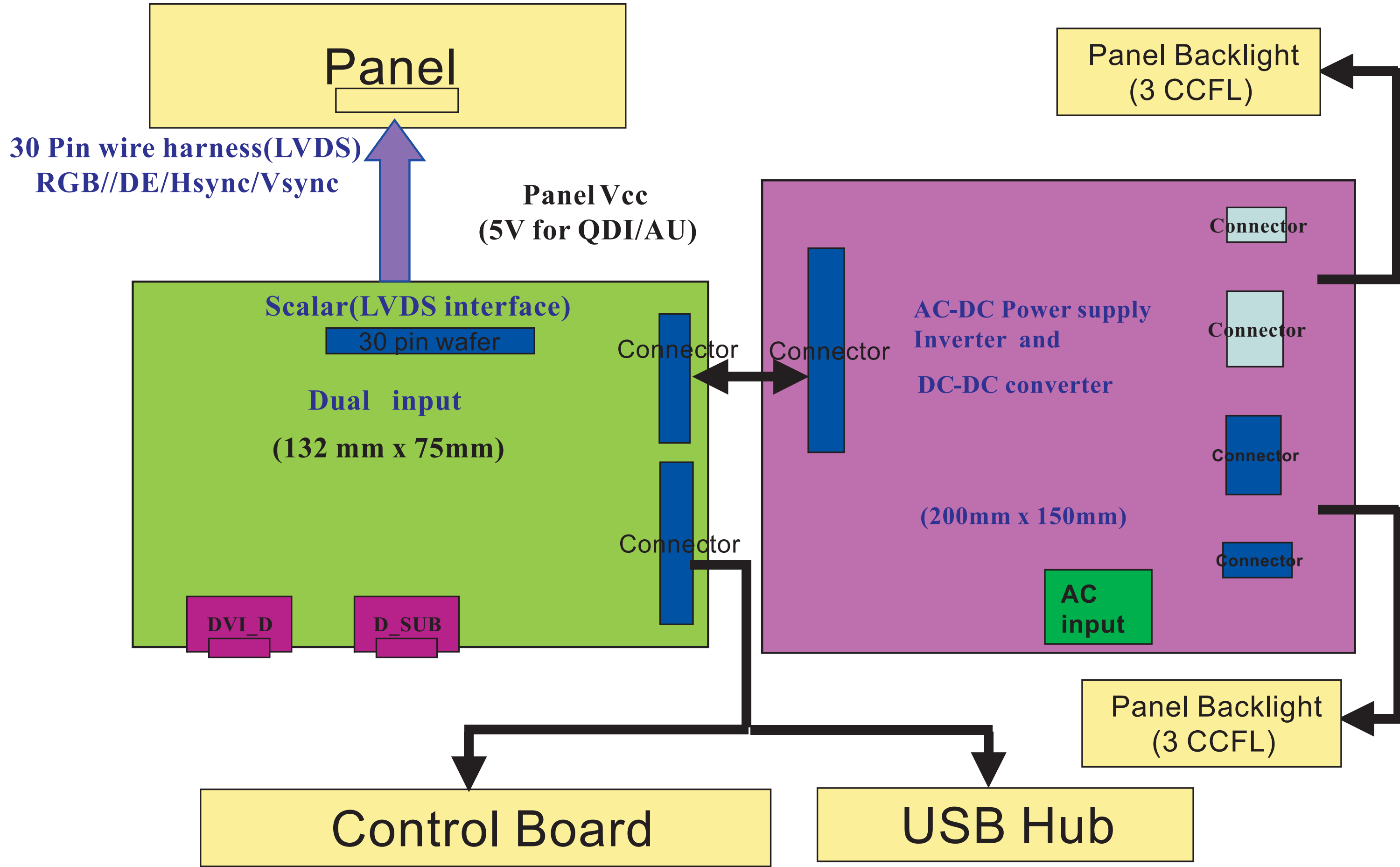


Repair Flow Chart

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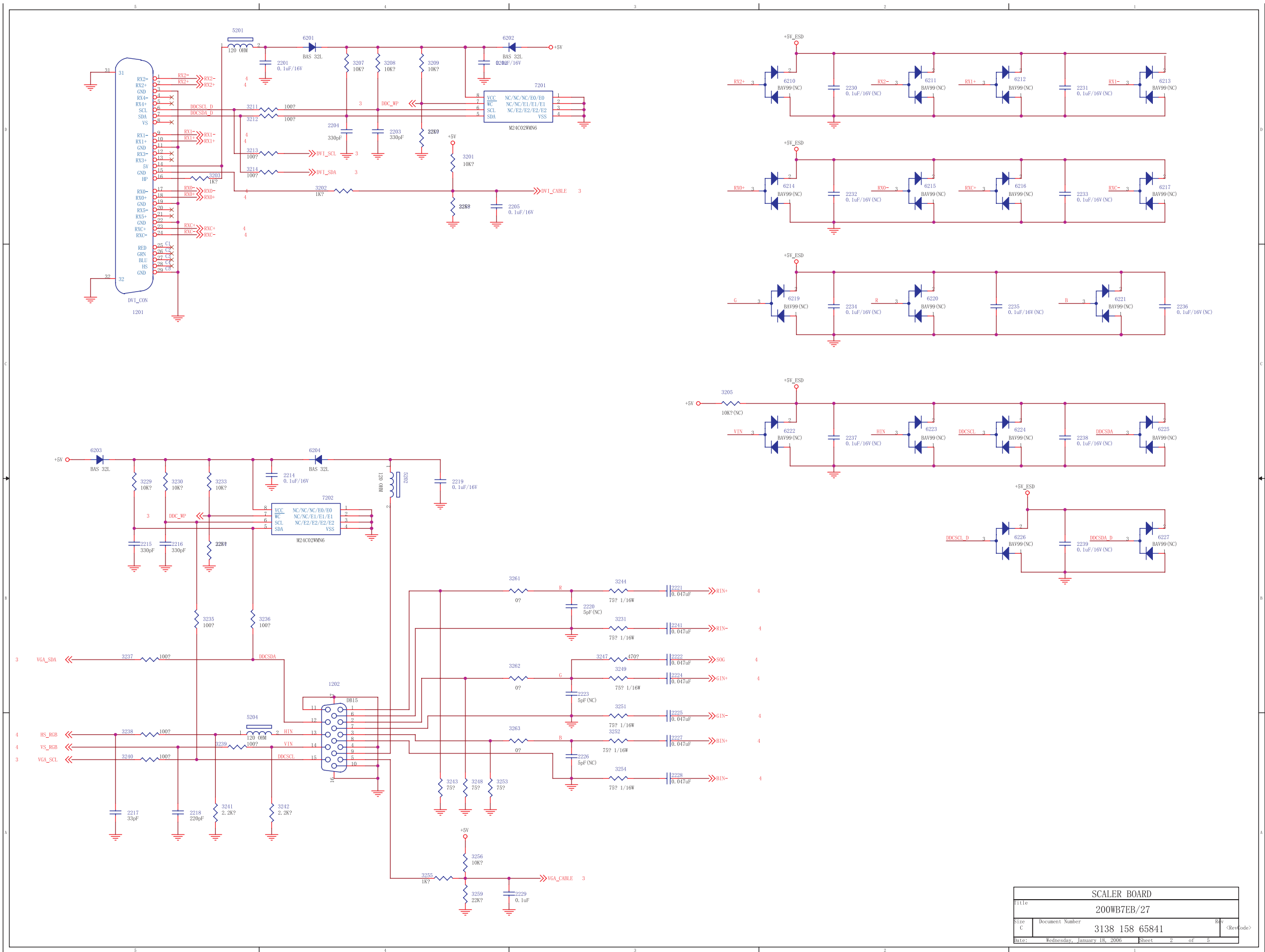


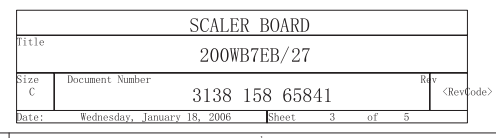
Block Diagram



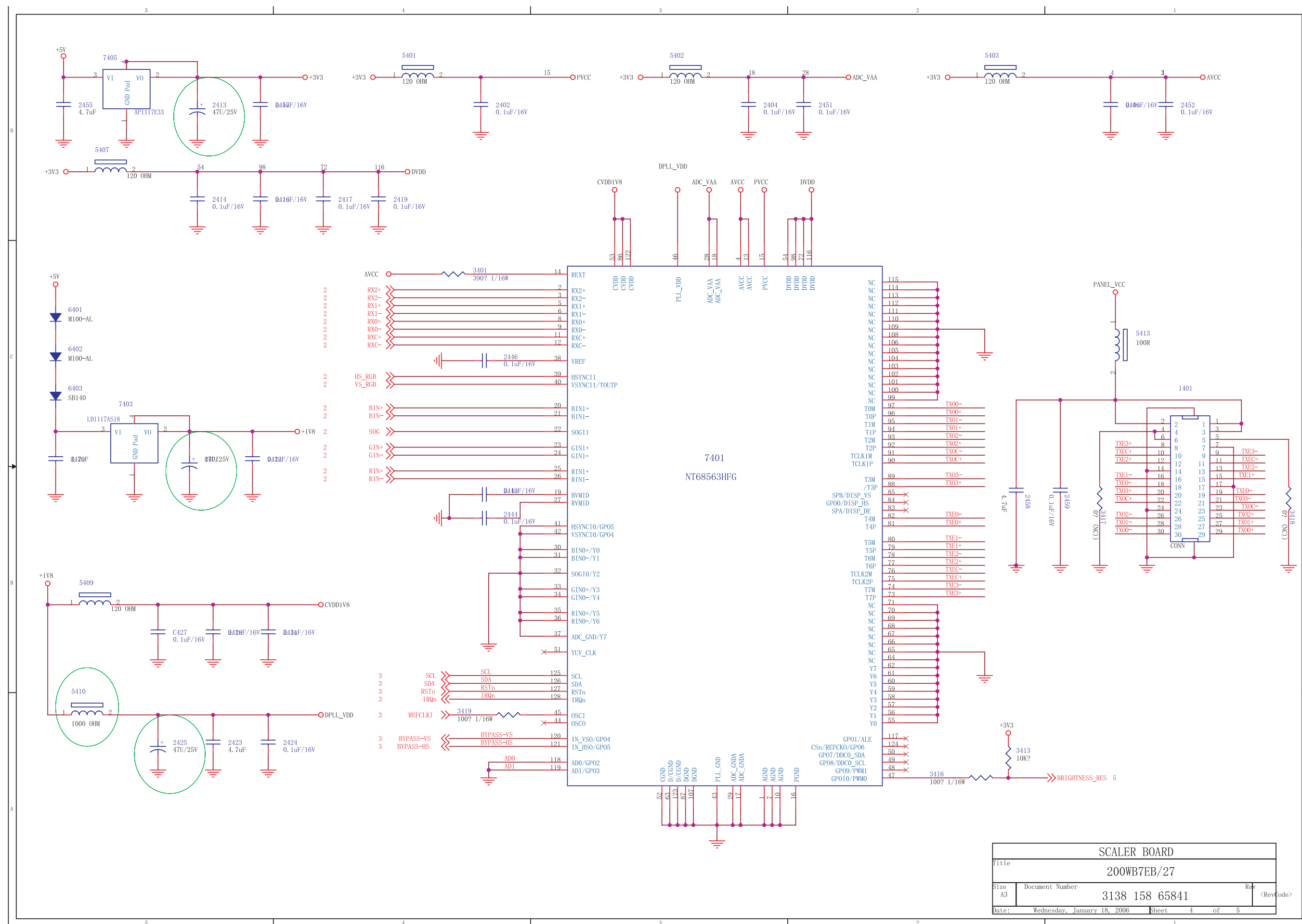
5	4	3	2	1																																																																																												
<div><div><div>CONTENTS</div><table><thead><tr><th>SCHEMATIC Name</th><th>SHEET</th></tr></thead><tbody><tr><td>01. Contents</td><td>1</td></tr><tr><td>02. DSUB/DVI</td><td>2</td></tr><tr><td>03. MCU</td><td>3</td></tr><tr><td>04. SCALER</td><td>4</td></tr><tr><td>05. IO</td><td>5</td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></tbody></table></div><div><div>REVISION HISTORY</div><table><thead><tr><th>Date</th><th>Author</th><th>Ver</th><th>Comments</th></tr></thead><tbody><tr><td>2005-09-21</td><td>Jerry Chen</td><td>A</td><td>PHILIPS UH7 200B7 SCALER SEHEMATIC FOR PROTOTYPE</td></tr><tr><td>2005-09-26</td><td>Jerry Chen</td><td>A</td><td>To add R419 100R at Scaler IC 68563HF pin 45</td></tr><tr><td>2005-09-26</td><td>Jerry Chen</td><td>A</td><td>To add C424 100N at IC 68563HF DPLL_VDD</td></tr><tr><td>2006-01-13</td><td>Kurtz Ko</td><td>1</td><td>Modify D-Sub Input circuits for phase improvement</td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr></tbody></table><table><thead><tr><th>Approval</th><th>Position</th><th>Signature</th><th>Date</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr></tbody></table><div><div>SCALER BOARD</div><div>Title</div><div>200WB7EB/27</div><div><div>Size</div><div>A</div><div>Document Number</div><div>3138 158 65841</div><div>Rev</div><div><RevCode></div></div><div><div>Date:</div><div>Wednesday, January 18, 2006</div><div>Sheet</div><div>1</div><div>of</div><div>5</div></div></div></div></div>					SCHEMATIC Name	SHEET	01. Contents	1	02. DSUB/DVI	2	03. MCU	3	04. SCALER	4	05. IO	5																					Date	Author	Ver	Comments	2005-09-21	Jerry Chen	A	PHILIPS UH7 200B7 SCALER SEHEMATIC FOR PROTOTYPE	2005-09-26	Jerry Chen	A	To add R419 100R at Scaler IC 68563HF pin 45	2005-09-26	Jerry Chen	A	To add C424 100N at IC 68563HF DPLL_VDD	2006-01-13	Kurtz Ko	1	Modify D-Sub Input circuits for phase improvement																					Approval	Position	Signature	Date																
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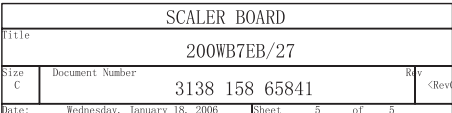
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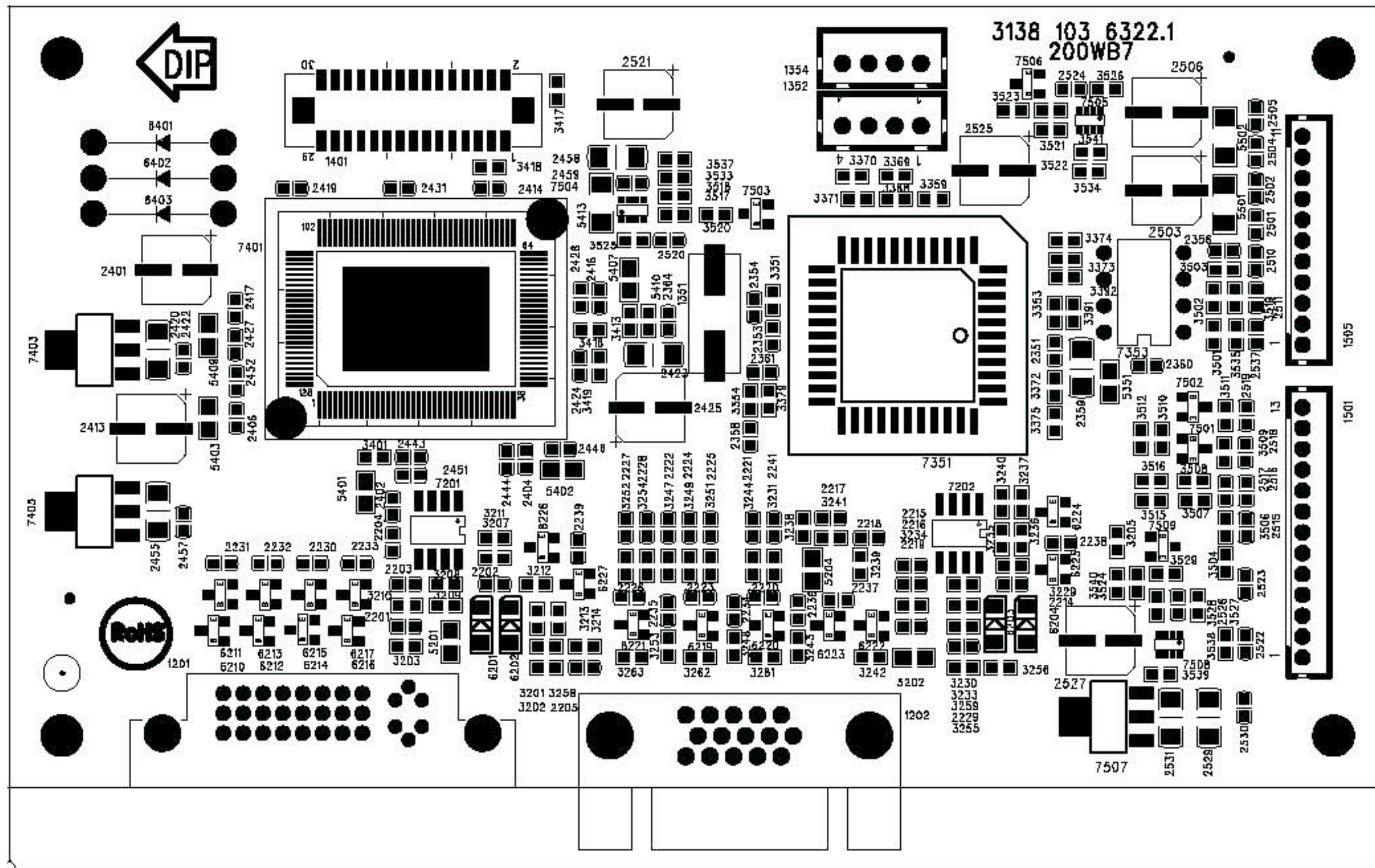


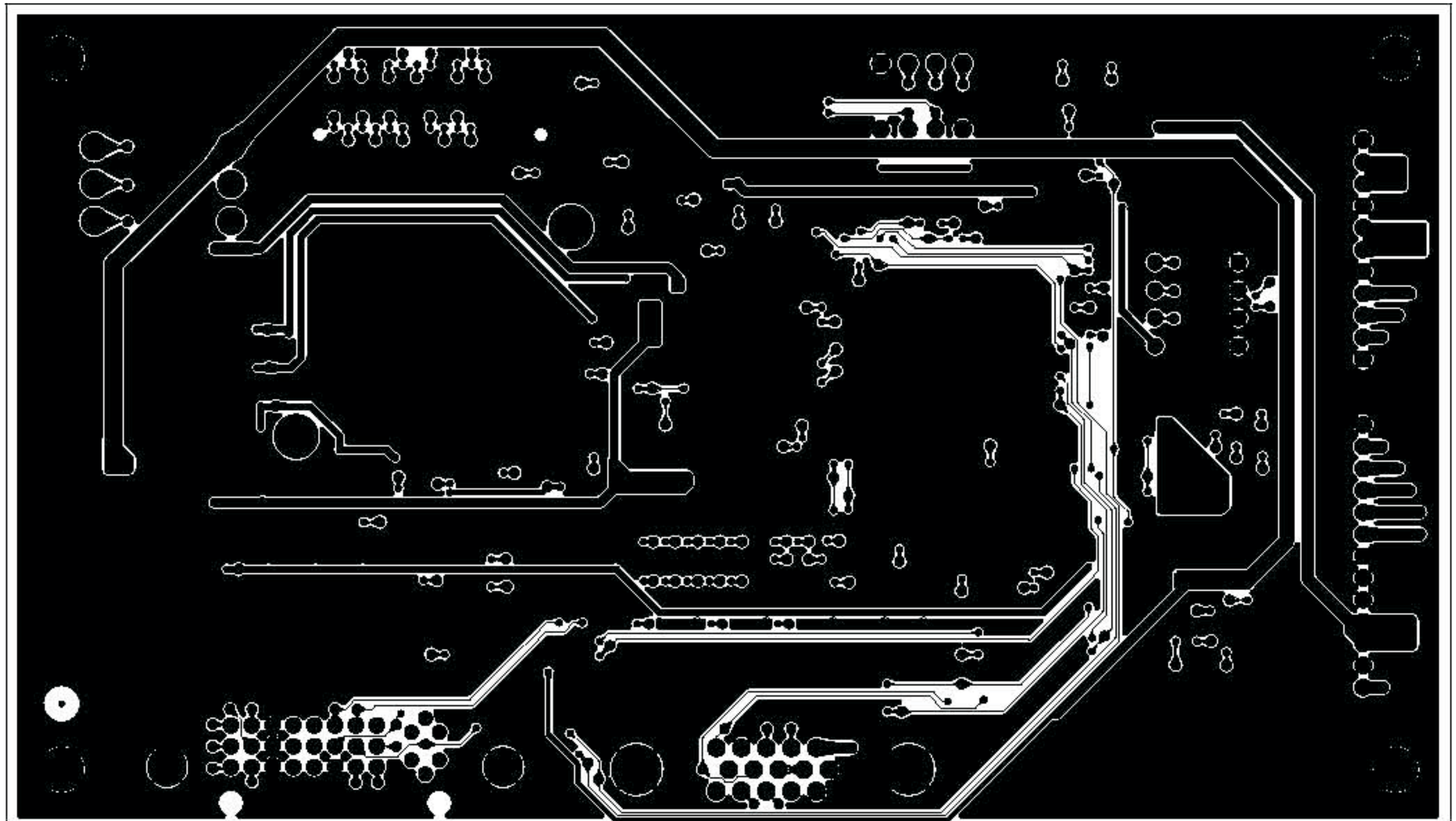
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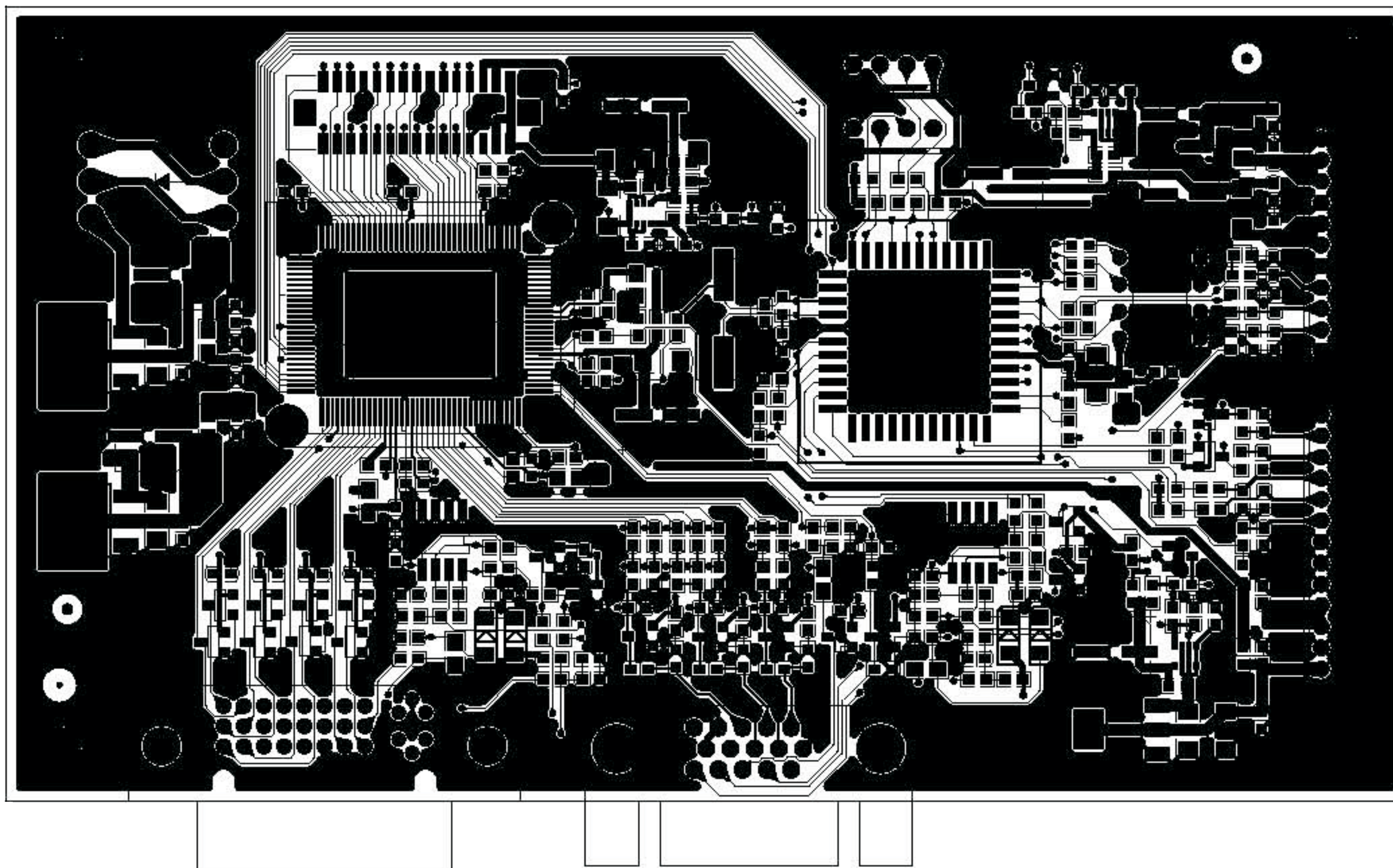


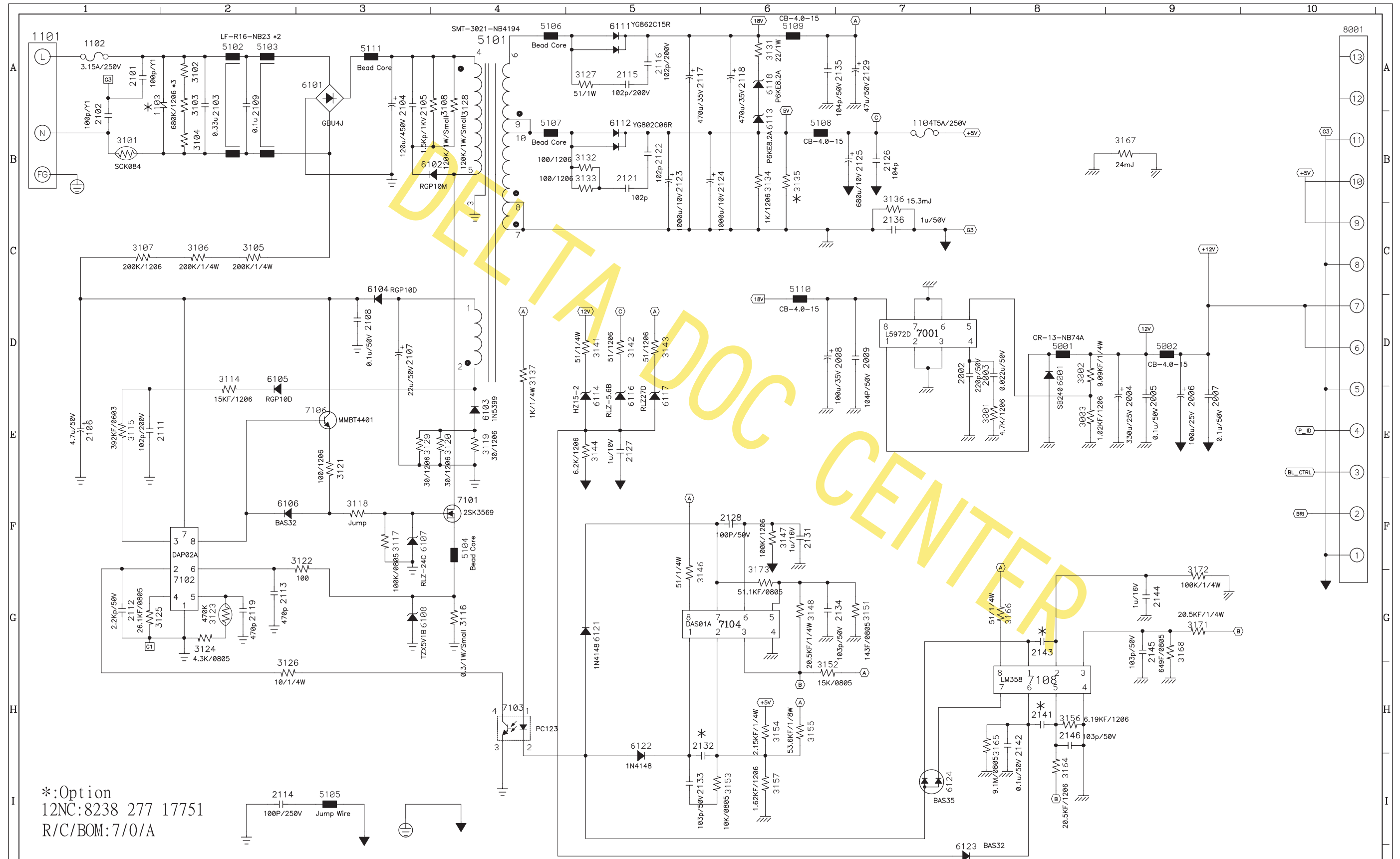


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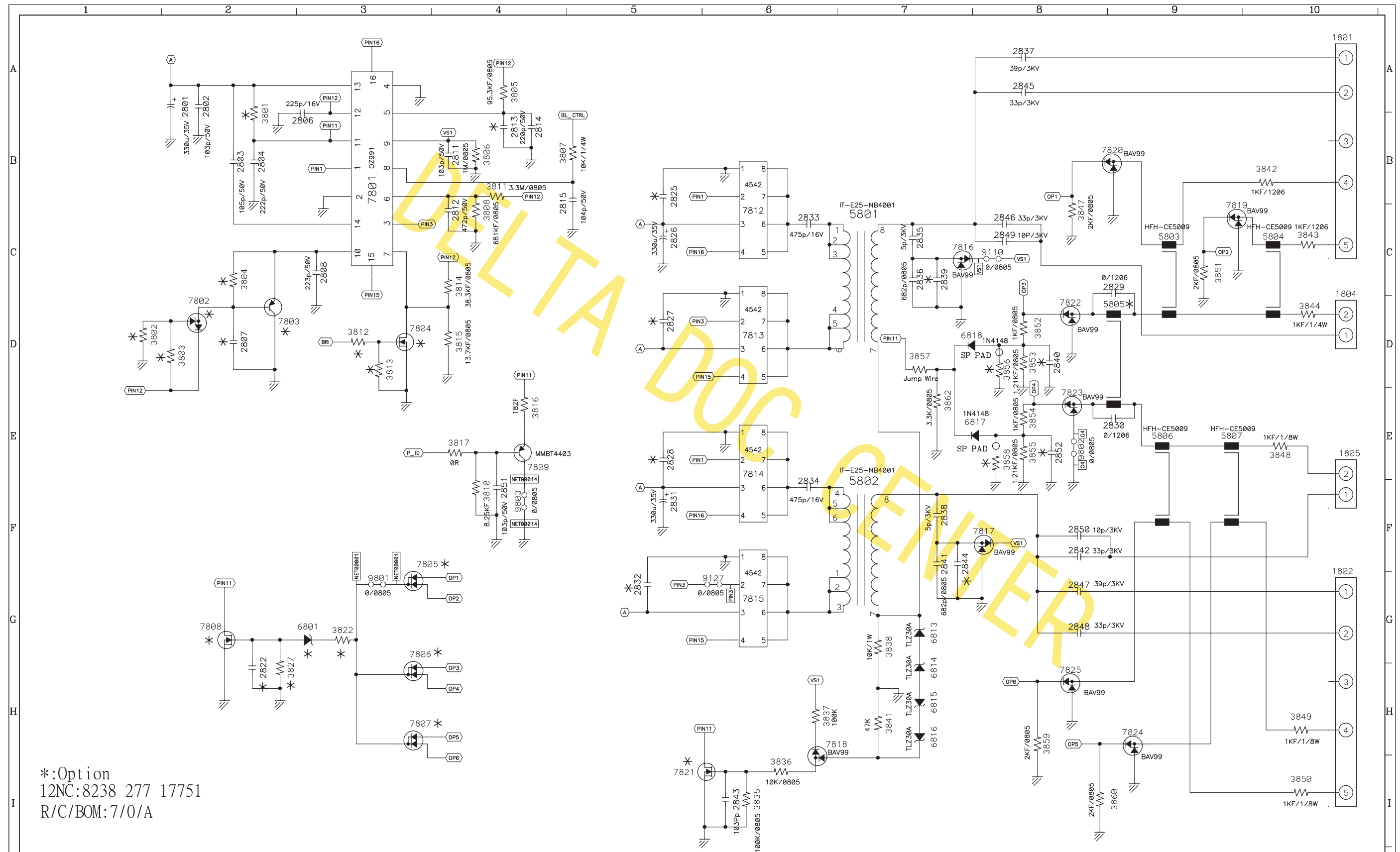


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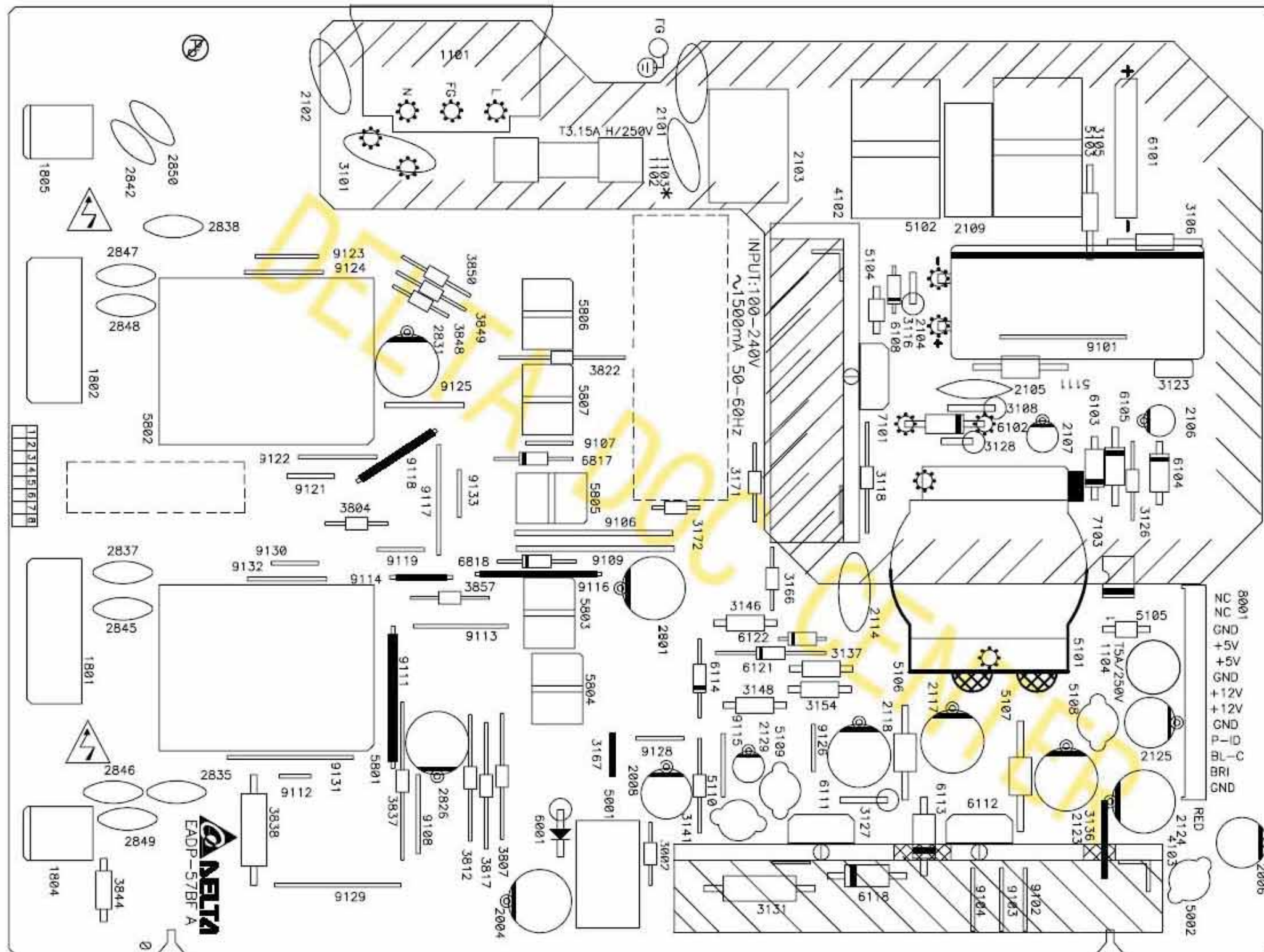
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Checked: 閻本孝
Approved: 彭勇維
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REV. S06
SHEET 01 OF 02

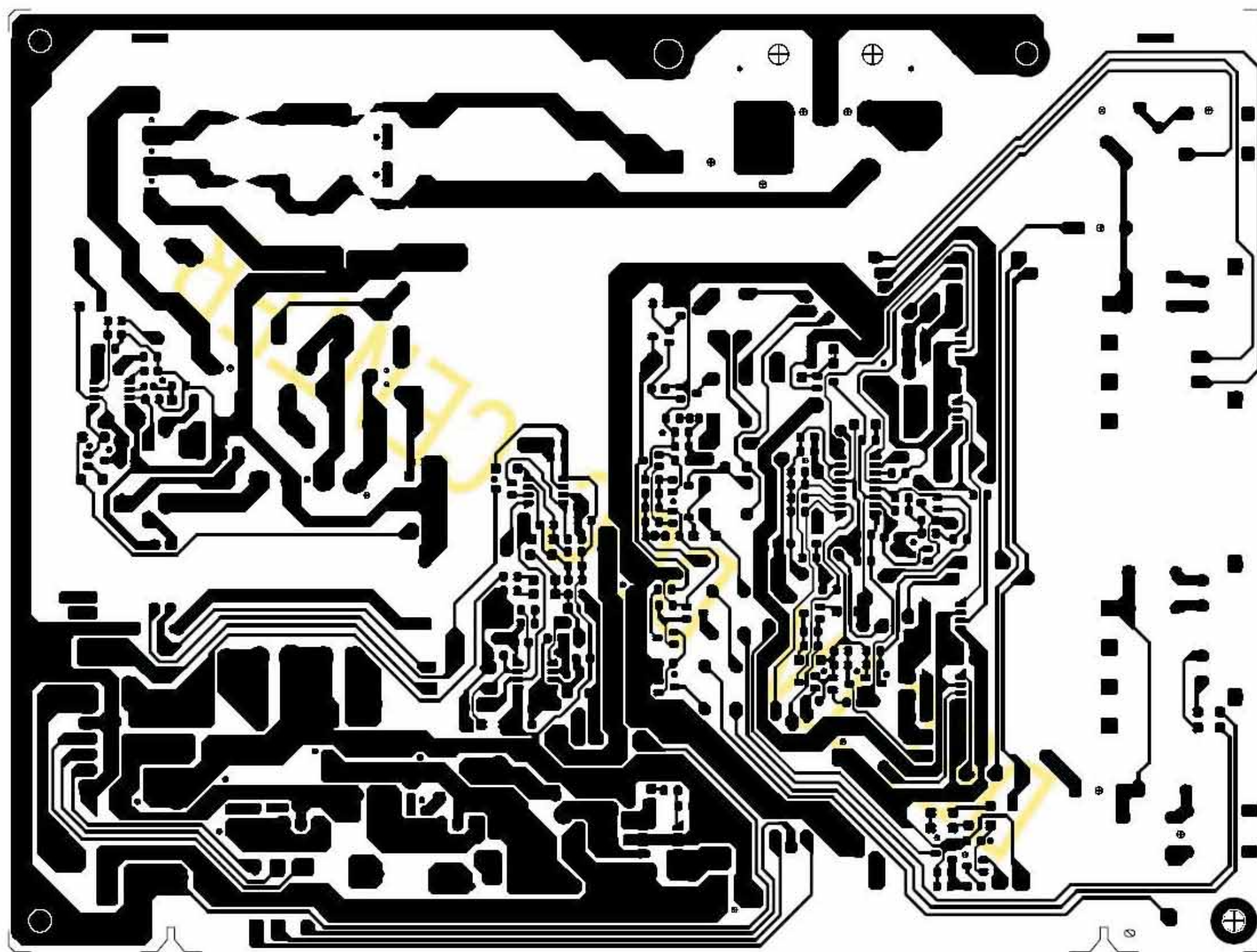
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 MADE BY: RACHEL DATE: 05/26/05
 P/N: 2941013106
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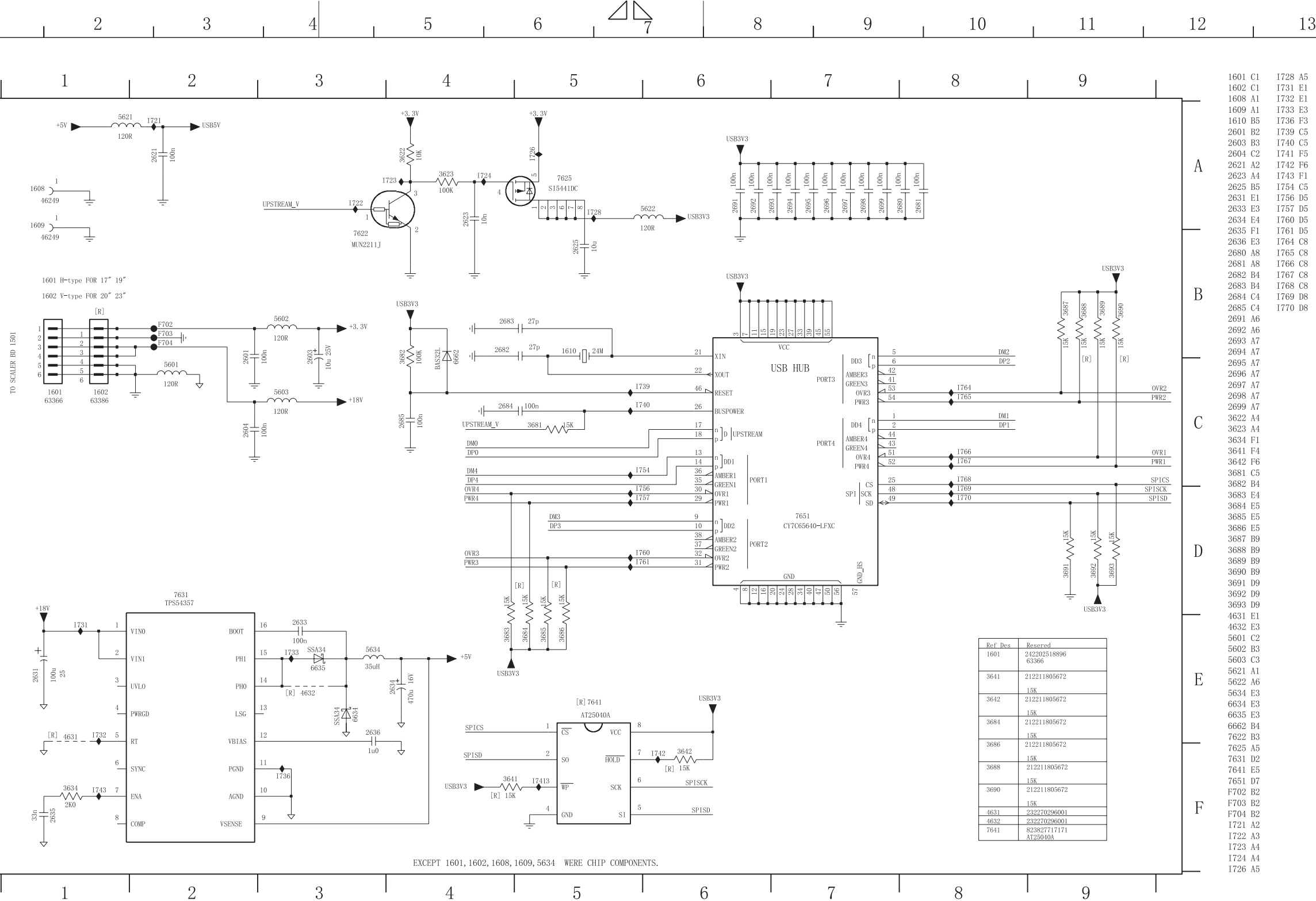
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	P/N: 2941013105	
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2006-02-10		3						3138 158 6711							
NAME		Hilton Lai/Sandy Yuan		SUPERS.		2		10		130 - 1				A3	
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USB Diagram

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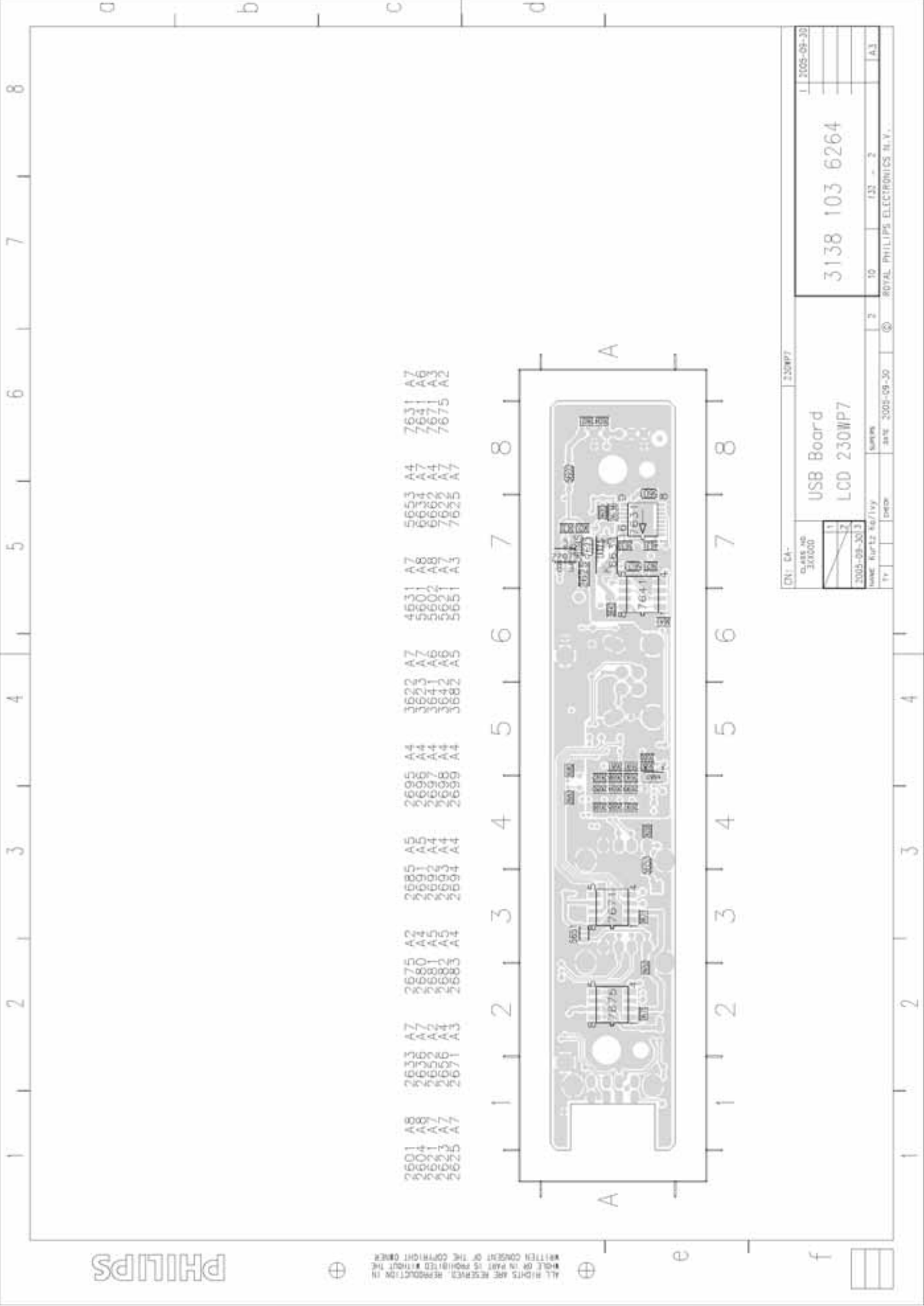
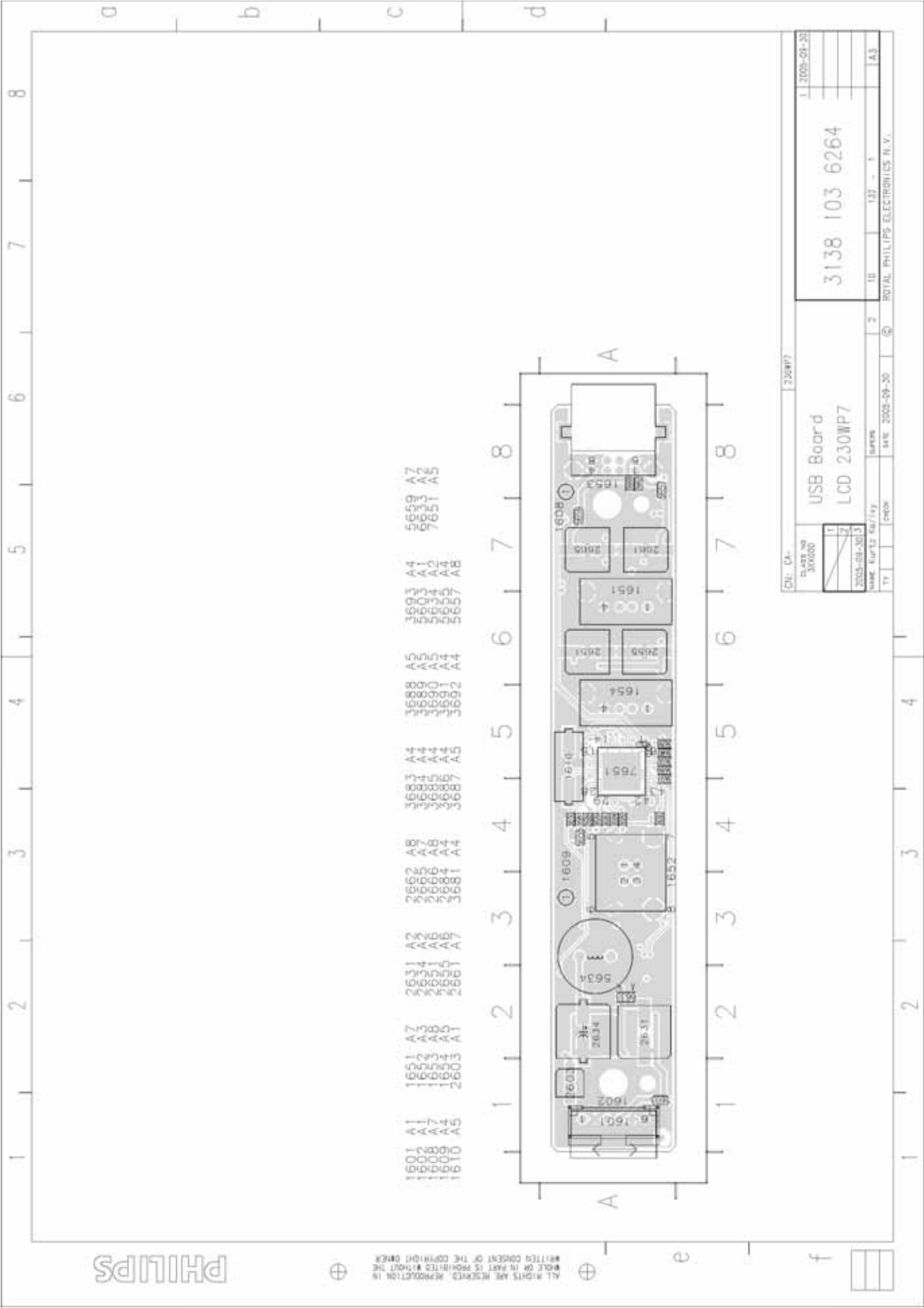
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2693 A7
2694 A7
2695 A7
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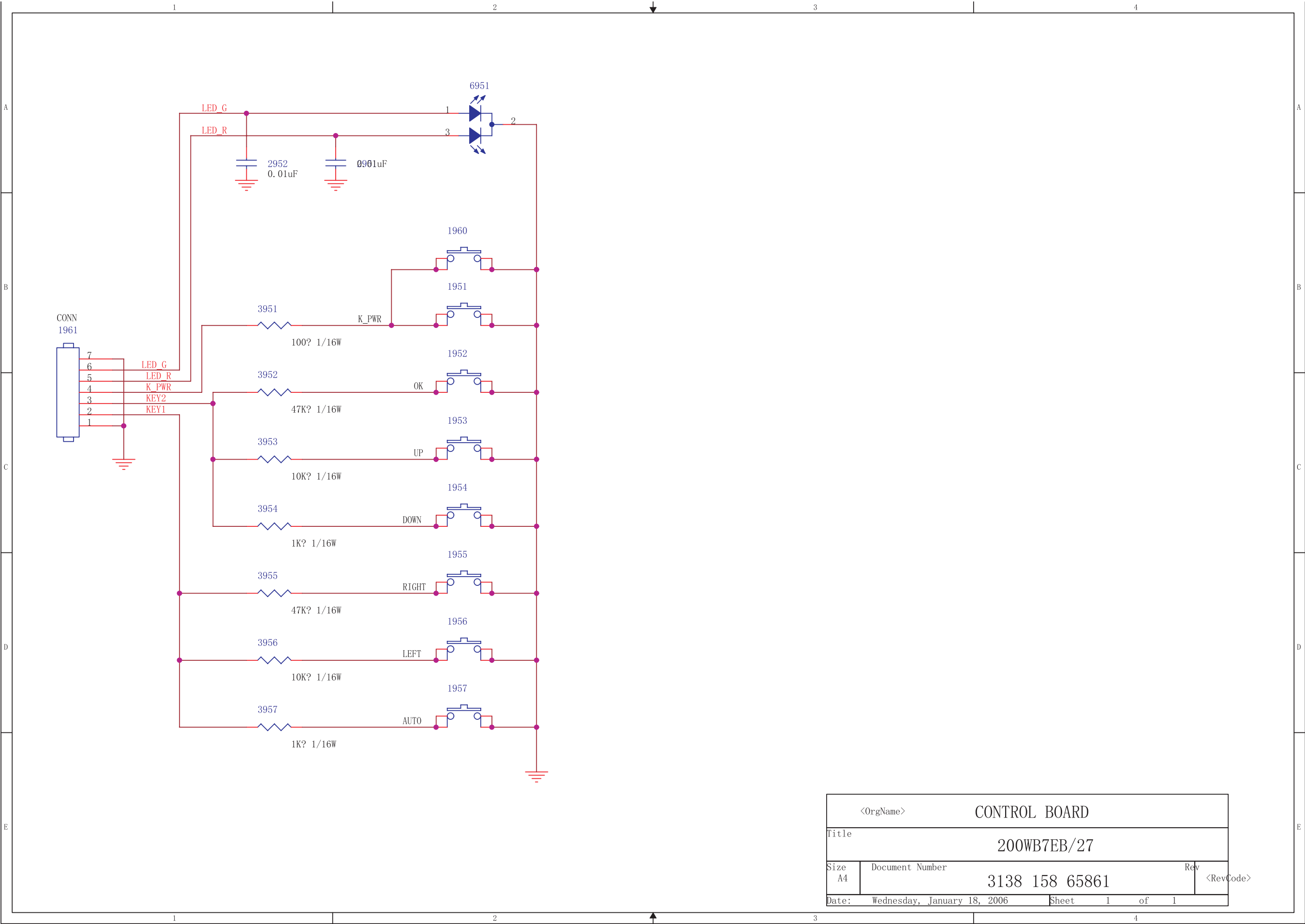
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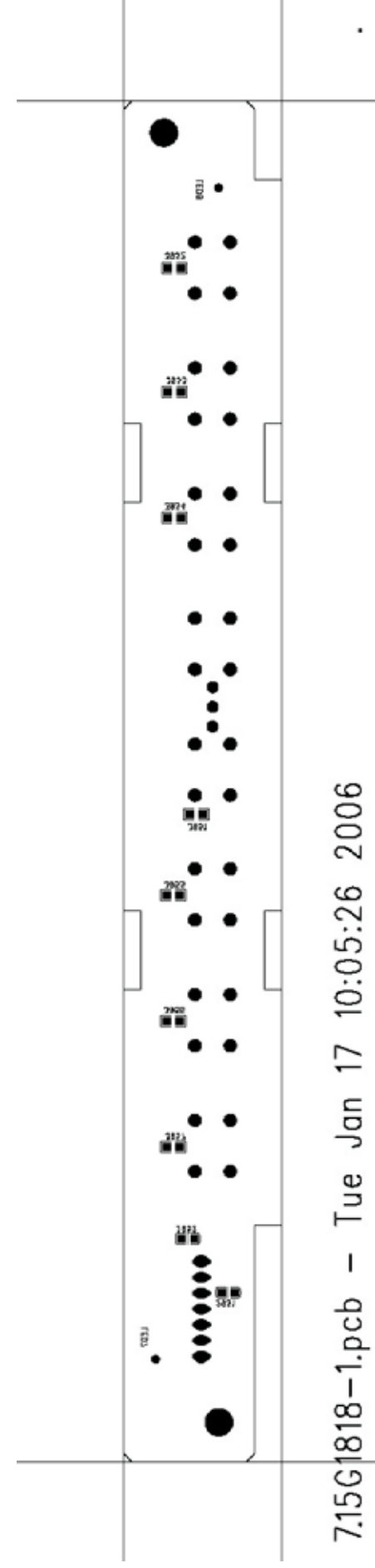
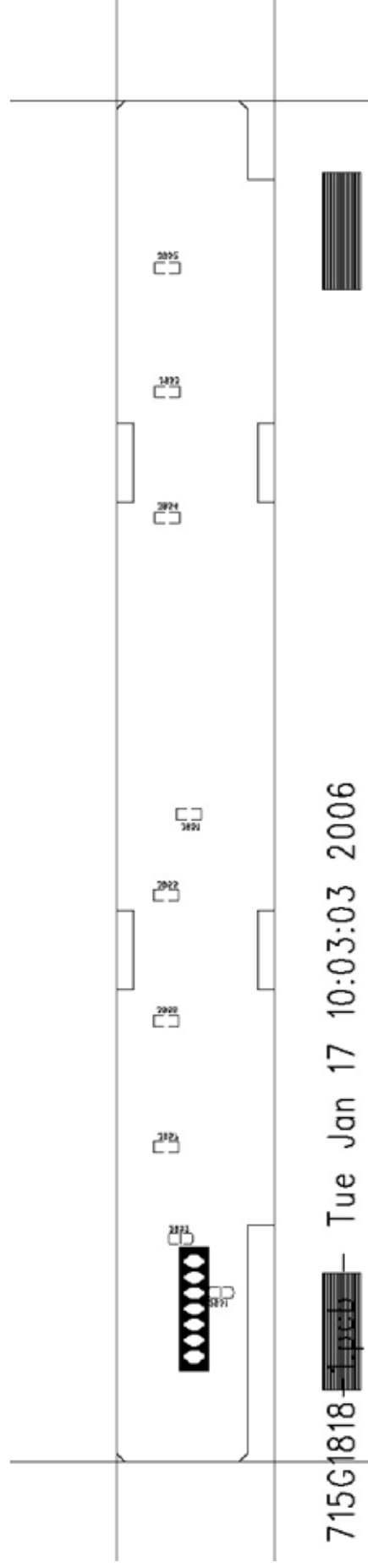
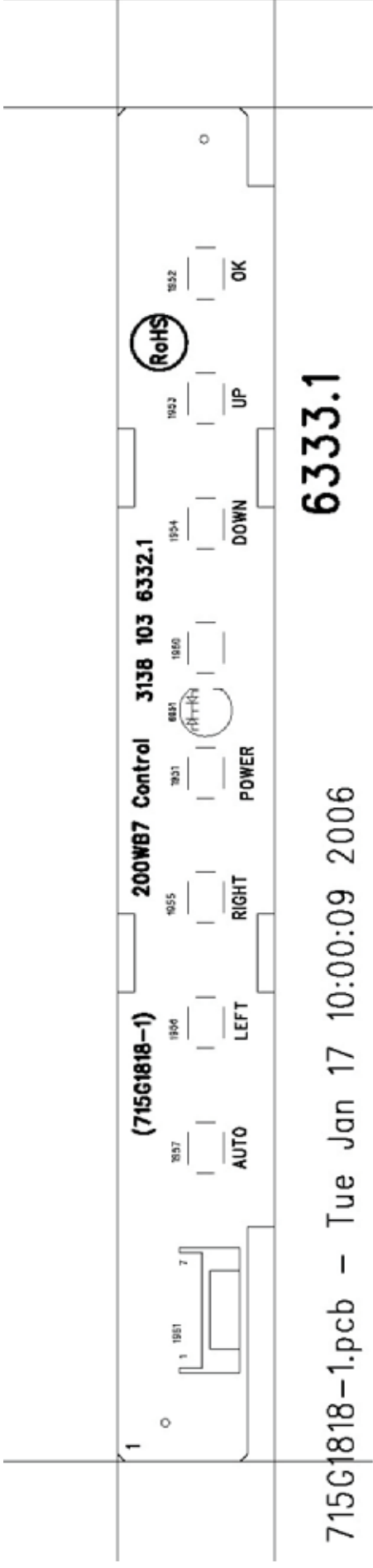
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NAME	Hilton Lai//Sandy Yuan	SUPERS.	2
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DATE	2006-02-10		
		ROYAL PHILIPS ELECTRONICS N.V. 2006	



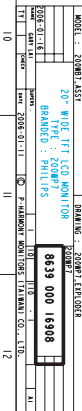
Control Board Diagram



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Title		200WB7EB/27	
Size	Document Number	Rev	<RevCode>
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Date:	Wednesday, January 18, 2006	Sheet	1 of 1



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HUDSON7-200WP7 20.1"
GENERAL PRODUCT
SPECIFICATION

- . ANALOG AND DIGITAL DUAL INPUT
- . AUTO PICTURE ADJUSTMENT
- . 15 FACTORY PRESET MODES AND 40 PRESET MODES WHICH CAN BE RECOVERED TO PRESET MODES, 25 USER MODES
- . USER FRIENDLY OSD DISPLAY FOR MODE IDENTIFICATION /ADJUSTMENT
- . DDC 2B COMMUNICATION CAPABILITY
- . MAX. RESOLUTION 1680*1050 NON-INTERLACED AT 76 HZ
- . 20.1 "COLOR TFT LCD FLAT PANEL
- . EASY TILT & FOLDABLE BASE
- . FULL RANGE POWER SUPPLY 90 - 264 VAC
- . CE ENVIRONMENTAL POLICY
- . ANTI-GLARE TO REDUCE LIGHT REFLECTION
- . POWER MANAGEMENT CAPABILITY
- . SOG SUPPORT
- . TCO 03

CLASS NO.

20.1" TFT UXGA LCD Monitor
(HUDSON 7-200WP7)

TYPE : 200WP7ES/00
BRAND : PHILIPS

8639 000 16908

2006-02-16

NAME Jason Wang

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CLASS NO.

20.1" TFT UXGA LCD Monitor
(HUDSON 7-200WP7)

TYPE : 200WP7ES/00

BRAND : PHILIPS

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 - 8.1 Acceptance test
- 9.0 Serviceability
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CLASS NO.

20.1" TFT UXGA LCD Monitor
(HUDSON 7-200WP7)

TYPE : 200WP7ES/00
BRAND : PHILIPS

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1.0 FOREWORD

This specification describes a 20.1" WSXGA multi-scan color TFT LCD monitor with max. resolution up to 1680*1050/ 60 Hz(digital) /1680*1050/75Hz(analog) non-interlaced.
All optical characteristics (including WHITE-D, Brightness, and so on) are determined according to panel specification after warming up approximate 30 minutes that brightness stability is optimal, and follows strictly after panel specification.

2.0 PRODUCT PROFILE

This display monitor unit is a color display monitor enclosed in PHILIPS global styling cabinet, which has an integrated tilt and swivel base.

2.1 LCD

Type NR. : LM201W01 SLA1 (LG.PHILIPS)
 Outside dimensions : 459.4(H)*296.4(V)*22.8(D) (Typ) mm
 Pixel Pitch (mm) : 0.258 mm x 0.258mm
 Color pixel arrangement : RGB vertical stripes
 Display surface : low reflection, antiglare with hard coating
 Color depth : 16.7M colors (8 bits)
 Backlight : Six CCFL's
 Active area(WxH) : 433.44x270.9mm (20.1" diagonal)
 View angle : Horizontal & Vertical 178 degree (CR>=10)
 Contrast ratio : 600:1 (Typ) ,500 :1 (min)
 White luminance : Panel original color >250nits (min), 300 nits (Typ.)

Type NR. : M201EW01 V0 (AUO)
 Outside dimensions : 459.4(H)*296.4(V)*22.8(D) (Typ.) mm
 Pixel Pitch (mm) : 0.258 mm x 0.258mm
 Color pixel arrangement : RGB vertical stripes
 Display surface : low reflection, antiglare with hard coating
 Color depth : 16.7M colors (8 bits)
 Backlight : Six CCFL's
 Active area(WxH) : 433.44x270.9mm (20.1" diagonal)
 View angle : Horizontal & Vertical 176 degree (CR>=10)
 Contrast ratio : 800:1 (Typ.) ,400 :1 (min)
 White luminance : Panel original color >240nits (min), 300 nits (Typ.)

2.2 Scanning frequencies

Hor. : 30 - 98 K Hz
 Ver. : 56 - 76 Hz

2.3 Video dot rate : 210 MHz

2.4 Power input : 90-264 V AC, 50/60 ± 2 Hz

CLASS NO.

20.1" TFT UXGA LCD Monitor
(HUDSON 7-200WP7)

TYPE : 200WP7ES/00

BRAND : PHILIPS

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- 2.5 Power consumption : < 60W maximum with USB
- 2.6 Dimensions : 483(W) * 402(H) * 235(D) mm
- Weight : 8.6Kg
- 2.8 Functions :
- (1) D-SUB analog R/G/B separate inputs, H/V sync separated, Composite (H+V) TTL level, SOG sync
- (2) DVI digital Panel Link TMDS input
- (3) Audio Signal: PC line in
- 2.9 Ambient temperature: 0 °C - 35 °C
- 2.10 Regulatory compliance:

Safety * Medical compliance only apply for dedicated models	B (Poland), CCC (China), CE (Europe), CSA (Canada), DEMKO (Nordic), EZU (Czech), FIMKO (Nordic), Gost (Russia), IEC 950 CB Report, NOM NYCE (Mexico), PSB (Singapore), SEMKO (Nordic), SISIR CPA (Singapore), TUV (Germany), UL (USA) UL2601-1 (NAFTA), EN60601-1-1 (EU) and IEC60601-1 (WW)
EMI	C-tick, CE (Europe), FCC (USA), IC (Canada), VCCI (Japan), BSMI
Ergonomics	E2000, Nutek(Sweden), TCO2003 (T-color) & TCO95 (Black/Silver), TUV/GS
Compatibility	Windows2000, Windows 98/Me, Windows XP, NSTL

CLASS NO.

20.1" TFT UXGA LCD Monitor
(HUDSON 7-200WP7)

TYPE : 200WP7ES/00
BRAND : PHILIPS

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3.0 Electrical characteristics

3.1 Interface signals

The input signals can be applied in three different modes:

1). D-Sub Analog

Input signal: Video, Hsync. , Vsync

Video: 0.7 Vp-p, input impedance, 75 ohms @DC

Sync. : Separate sync TTL level, input impedance 2.2k ohm terminate

Hsync Positive/Negative

Vsync Positive/Negative

Composite sync TTL level, input impedance 5k ohm terminate
(Positive/Negative)

Sync on green video 0.3 Vp-p Negative (Video 0.7 Vp-p Positive)

2). Intel DVI Digital

Input signal: Single channel TMDS signal

3.2 Interface

3.2.1 D-Sub Cable

Length : 1.8 M +100/- 0 mm (fixed)

Connector type : D-Sub male with DDC2B pin assignments.

Blue connector thumb-operated jackscrews

USB hub

Input signal: Upstream input (V_{BUS}, D+, D-, GND) via USB-B receptacle.

Output signal: Downstream output (V_{BUS}, D+, D-, GND) through USB-A receptacle

CLASS NO.

20.1" TFT UXGA LCD Monitor
(HUDSON 7-200WP7)

TYPE : 200WP7ES/00

BRAND : PHILIPS

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Pin assignment:

PIN No.	SIGNAL
1	Red
2	Green/ SOG
3	Blue
4	Sense (GND)
5	Cable detect
6	Red GND
7	Green GND
8	Blue GND
9	DDC +5V
10	GND
11	Sense (GND)
12	Bi-directional data
13	H/H+V sync
14	V-sync
15	Data clock

3.2.2 DVI Cable

The input signals are applied to the display through DVI-D cable.

Length : 1.8 M +/- 50 mm (fixed)

Connector type : DVI-D male with DDC-2B pin assignments

White connector thumb-operated jackscrews

Pin assignment:

Pin No.	Description
1	TMDS data2-
2	TMDS data2+
3	TMDS data2 shield
4	NC
5	NC
6	DDC clock
7	DDC data
8	Analog V-sync
9	TMDS data1-
10	TMDS data1+
11	TMDS data1 shield
12	NC
13	NC
14	+5V
15	Ground (return for +5V and H/Vsync)
16	Hot plug detect
17	TMDS data0-

CLASS NO.

20.1" TFT UXGA LCD Monitor
(HUDSON 7-200WP7)

TYPE : 200WP7ES/00

BRAND : PHILIPS

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18	TMDS data0+
19	TMDS data0 shield
20	NC
21	NC
22	TMDS clock shield
23	TMDS clock+
24	TMDS clock-

- 3.2.3 USB Cable (High Full Speed)
- Length. : 1.8 M +/- 50 mm (Max.)
- Connector type. : USB- B Plug (Input)
USB- A Plug (Output)

Pin Assignment:

Pin No.	Description
1	VBUS
2	Data+
3	Data-
4	GND

- 3.2.5 Software control functions via OSD/control adjustable functions:

(1) PC Analog only Signal Input Mode

Adjustable functions:

CLASS NO.

20.1" TFT UXGA LCD Monitor
(HUDSON 7-200WP7)

TYPE : 200WP7ES/00

BRAND : PHILIPS

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NAME Jason Wang

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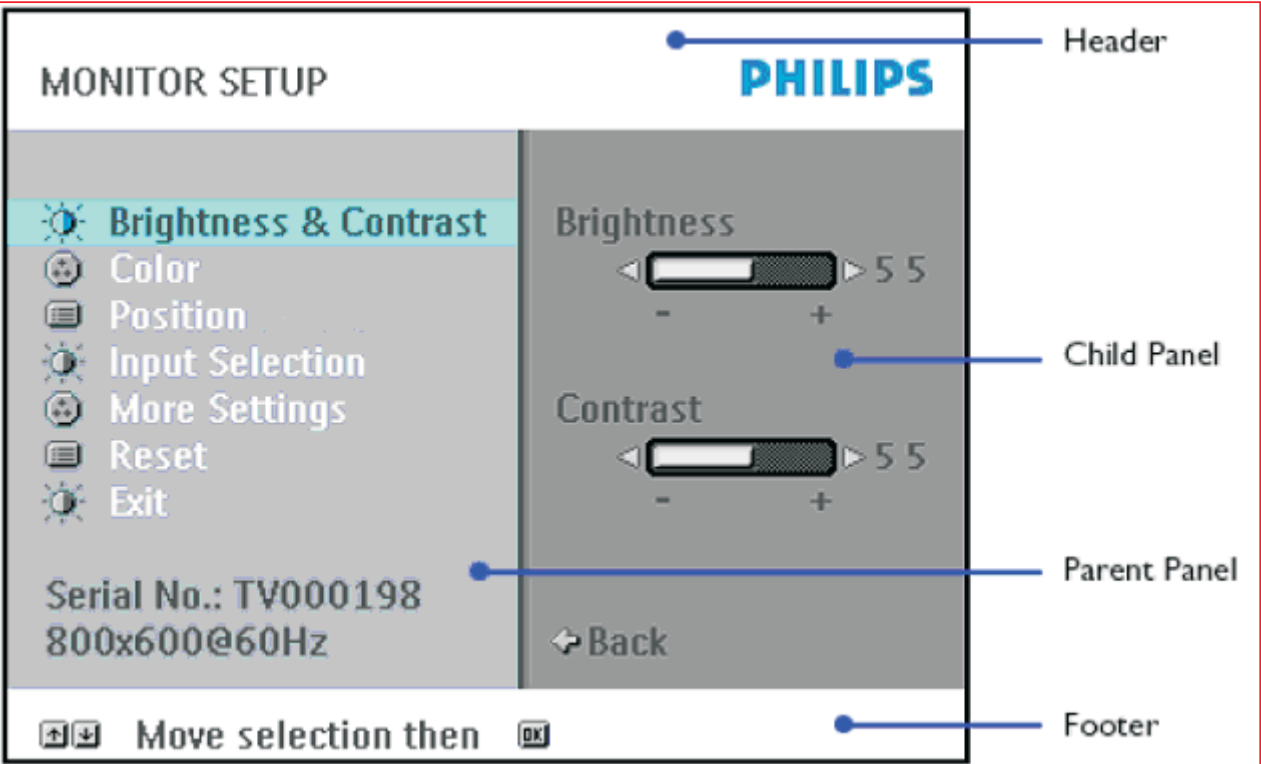
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Main Menu	Sub Menu	Sub Menu 2	Description	Default
Exit			Default starting point	
Brightness & Contrast				
	Brightness		Sliding bar	100
	Contrast		Sliding bar	50
Color				
	Original			
	9300K			
	6500K			6500K
	sRGB			
	User define			

CLASS NO.		20.1" TFT UXGA LCD Monitor (HUDSON 7-200WP7)		8639 000 16908	
2006-02-16		TYPE : 200WP7ES/00 BRAND : PHILIPS			
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	R		Sliding bar	
	G		Sliding bar	
	B		Sliding bar	
Position				
	Position			
	Horizontal		Sliding bar	
	Vertical		Sliding bar	
More Settings				
	Language	English	Left/right arrow to select	English
		French		
		German		
		Italian		
		Spanish		
		Russian		
	Phase / Clock	Phase	Sliding bar	
		Clock	Sliding bar	
	OSD setting	OSD position V		
		OSD position H	Sliding bar	
Reset				

(2) Digital interface OSD :

Adjustable functions:

1 st LEVEL	2 nd LEVEL	3 rd LEVEL
MONITOR SETUP		
Exit		
Brightness & Contrast	Brightness Contrast	
Color	Original Color, 9300K, 6500K, sRGB, User Define	
Input Selection	Analog(D-Sub), Digital (DVI-D), Analog (DVI-A)	

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More Settings	Language	/00./05 : English, Spanish, French, German, Italian and Russian
Reset	Phase/ Clock	Phase Clock
	OSD Settings	Horizontal Vertical
	No Yes	
Serial No.:		
(Serial No.)		
Timing Mode		
Up/Down to Move, <input type="checkbox"/> to Confirm		

3.3 Timing requirement

3.3.1 Mode storing capacity

- 1.) Factory preset modes : 15
- 2.) Preset modes : 40
- 3.) User define modes : 24

3.3.2 Factory preset timings

The factory settings of size and centering are according to the reference timing charts
(See fig-4, fig-5)

MODE NO.	1	2	3	4
RESOLUTION	640 x 350	720 x 400	640 x 480	640 x 480
Dot clock (MHz)	25.175	28.321	25.175	30.24
f h	31.469kHz	31.468kHz	31.5kHz	35 kHz
H-total (us)	31.778(800 dots)	31.78(900dots)	31.778(800 dots)	28.571 (864 dots)
H-sync width (us)	3.813(96 dots)	3.813(108dots)	3.813(96 dots)	2.116 (64 dots)
H-back porch (us)	1.907(48 dots)	1.907(54dots)	1.907(48 dots)	3.175(96 dots)
H-video width (us)	25.422(640 dots)	25.42(720dots)	25.422(640 dots)	21.164(640 dots)
H-front porch (us)	0.636(16 dots)	0.636(18dots)	0.636(16 dots)	2.116(64 dots)

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GENERAL PRODUCT SPECIFICATION

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f v	70Hz(70.09)	70Hz(70.085)	60Hz(59.940)	67Hz
V-total (ms)	14.27(449 lines)	14.27(449 lines)	16.683 (525 lines)	15 (525 lines)
V-sync width (ms)	0.064(2 lines)	0.064(2 lines)	0.064 (2 lines)	0.086(3 lines)
V-back porch (ms)	1.907(60 lines)	1.112(34 lines)	1.049 (33 lines)	1.114(39 lines)
V-video width (ms)	11.12(350 lines)	12.71(400 lines)	15.253 (480 lines)	13.714(480 lines)
V-front porch (ms)	1.175(37 lines)	0.381(13 lines)	0.317 (10 lines)	0.086(3 lines)
SYNC. H/V	+/-	-/+	- / -	- / -
POLARITY				
SEP. SYNC	Y	Y	Y	Y

MODE NO.	5	6	7	8
RESOLUTION	640 x 480	800 x 600	800 x 600	800 x 600
Dot clock (MHz)	31.500	36	40	49.498
f h	37.5kHz	35.156kHz	37.879kHz	46.875kHz
H-total (us)	26.667 (840 dots)	28.444(1024 dots)	26.4 (1056 dots)	21.333 (1056 dots)
H-sync width (us)	2.032 (64 dots)	2.000 (72 dots)	3.2 (128 dots)	1.616 (80 dots)
H-back porch (us)	3.81 (120 dots)	3.556 (128 dots)	2.2 (88 dots)	3.232 (160 dots)
H-video width (us)	20.317 (640 dots)	22.222(800 dots)	20 (800 dots)	16.162 (800 dots)
H-front porch (us)	0.508 (16 dots)	0.666 (24 dots)	1 (40 dots)	0.323 (16 dots)
f v	75Hz	56.250Hz	60.317Hz	75Hz
V-total (ms)	13.333 (500 lines)	17.778 (625 lines)	16.579 (628 lines)	13.333 (625 lines)
V-sync width (ms)	0.08 (3 lines)	0.057 (2 lines)	0.106 (4 lines)	0.064 (3 lines)
V-back porch (ms)	0.427 (16 lines)	0.626 (22 lines)	0.607 (23 lines)	0.448 (21 lines)
V-video width (ms)	12.8 (480 lines)	17.066 (600 lines)	15.84 (600lines)	12.8 (600 lines)
V-front porch (ms)	0.026 (1 line)	0.029 (1 line)	0.026 (1 line)	0.021 (1 line)
SYNC. H/V	- / -	+ / +	+ / +	+ / +
POLARITY				
SEP. SYNC	Y	Y	Y	Y

MODE NO.	9	10	11	12
RESOLUTION	1024 x 768	1024 x 768	1152 x 870	1280 x 1024
Dot clock (MHz)	65	78.75	100	108
f h	48.363kHz	60.023kHz	68.7kHz	63.981kHz
H-total (us)	20.677(1344 dots)	16.66 (1312dots)	14.56 (1456 dots)	15.63 (1688 dots)
H-sync width (us)	2.092(136 dots)	1.219 (96 dots)	1.28 (128 dots)	1.037 (112 dots)
H-back porch (us)	2.462(160 dots)	2.235 (176 dots)	1.44(144 dots)	2.296 (248 dots)
H-video width (us)	15.754(1024 dots)	13.003 (1024 dots)	11.52 (1152 dots)	11.852 (1280 dots)
H-front porch (us)	0.369(24 dots)	0.203 (16 dots)	0.32 (32 dots)	0.445 (48 dots)
f v	60.004Hz	75Hz (75.000)	75Hz	60.020Hz
V-total (ms)	16.666(806 lines)	13.328 (800 lines)	13.333 (916 lines)	16.661 (1066 lines)
V-sync width (ms)	0.124(6 lines)	0.05(3 lines)	0.044 (3 lines)	0.047 (3 lines)
V-back porch (ms)	0.600(29 lines)	0.446 (28 lines)	0.568(39 lines)	0.594 (38 lines)
V-video width (ms)	15.880(768 lines)	12.80 (768 lines)	12.678 (870 lines)	16.005 (1024 lines)
V-front porch (ms)	0.062(3 lines)	0.017 (1 line)	0.043 (4 line)	0.015 (1 line)
SYNC. H/V	- / -	+ / +	- / -	+ / +
POLARITY				

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SEP. SYNC	Y	Y	Y	Y
MODE NO.	13	14	15	
RESOLUTION	1280 x 1024	1600 x 1200	1680 x 1050	
Dot clock (MHz)	135	162	146.249	
f h (kHz)	79.976kHz	75	65.29	
H-total (us)	12.504(1688 dots)	13.333(2160 dots)	15.316(2240 dots)	
H-sync width (us)	1.067(144 dots)	1.185(192 dots)	1.203(176 dots)	
H-back porch (us)	1.837(248 dots)	1.877(304 dots)	1.915(280 dots)	
H-video width (us)	9.481(1280 dots)	9.877(1600 dots)	11.487(1680 dots)	
H-front porch (us)	0.119(16 dots)	0.395(64 dots)	0.711(104 dots)	
f v (Hz)	75.025Hz	60.000	59.954	
V-total (ms)	13.329(1066 lines)	16.667(1250 lines)	16.679(1089 lines)	
V-sync width (ms)	0.038(3 lines)	0.040(3 lines)	0.092(6 lines)	
V-back porch (ms)	0.475(38 lines)	0.613(46 lines)	0.459(30 lines)	
V-video width (ms)	12.804(1024 lines)	16.000(1200 lines)	16.082(1050 lines)	
V-front porch (ms)	0.012 (1 line)	0.013(1 lines)	0.046(3 lines)	
SYNC. H/V	+/+	+/+	+/+	
POLARITY				
SEP. SYNC	Y	Y	Y	

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3.3.3 Horizontal scanning
Sync polarity : Positive or Negative
Scanning frequency : 30 - 98 K Hz

3.3.4 Vertical scanning
Sync polarity : Positive or Negative
Scanning frequency : 56 - 76 Hz

3.4 Power input connection
Power cord length : 1.8 M
Power cord type : 3 leads power cord with protective earth plug.

3.5 Power management
The monitor must comply with the Microsoft On Now specification, with two power management states, as defined by the VESA DPMS document. The monitor

Mode	HSYNC	VSYNC	Video	Pwr-cons.	Indication	Rec. time
Power-On	On	On	active	< 60 W	Green LED	With USB
Power-On	On	On	active	< 48 W	Green LED	Without USB
Off	Off	On	blanked	< 2 W	Amber LED	< 3 s
Off	On	Off	blanked	< 2 W	Amber LED	< 3 s
Off	Off	Off	blanked	< 2 W	Amber LED	< 3 s
DC Power Off			N/A	< 1W	LED Off	

3.6 Display identification

3.6.1 In accordance with VESA Display Channel Standard Ver.1.0 and having DDC 2B capability

3.6.2 In accordance with DVI requirement (DDWG digital Visual Interface revision 1.0) use DDC 2B and EDID 3.0 structure 2.0

4.0 Visual characteristics

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4.1 Test conditions

Unless otherwise specified, this specification is defined under the following conditions.

- (1) Input signal : As defined in 3.3, 1600x 1200 non-interlaced mode (75K/60Hz), signal sources must have 75 ohm output impedance.
- (2) Luminance setting: controls to be set to 200 nits with full screen 70 % duty cycle white signal
- (3) Warm up: more than 30 minutes after power on with signal supplied.
- (4) Ambient light: 400 -- 600 lux.
- (5) Ambient temperature: 20 +/- 5 °C

4.2 Resolution:

Factory preset modes (15 modes)

Item	H.Freq. (KHz)	Mode	Resolution	V.Freq. (Hz)	Item	H.Freq. (KHz)	Mode	Resolutio n	V.Freq . (Hz)
1	31.469	IBM VGA 10H	640x350	70.086	9	48.363	VESA	1024x768	60.004
2	31.469	IBM VGA 3H	720x400	70.087	10	60.023	VESA	1024x768	75.029
3	31.469	IBM VGA 12H	640x480	59.940	11	68.700	MACINTOSH	1152x870	75.000
4	35.000	MACINTOSH	640x480	67.000	12	63.981	VESA	1280x1024	60.020
5	37.500	VESA	640x480	75.000	13	79.976	VESA	1280x1024	75.025
6	35.156	VESA	800x600	56.250	14	75.0	VESA	1600x1200	60
7	37.879	VESA	800x600	60.317	15	65.29	-	1680x1050	60.0
8	46.875	VESA	800x600	75.000					

- Note: 1. Screen displays at 40 preset modes
 2. Screen displays perfect picture at 15 factory-preset modes
 3. Screen displays visible picture with OSD warning when input modes are other than 22 preset modes

4.3 Brightness: >=300 nits (at panel color temperature, at center of the screen, set contrast)

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and brightness at maximum.)

4.4 Image size

4.4.1 Actual display size

433.44 x 270.9mm

4.5 Brightness uniformity

Set contrast at 100% and turn the brightness to get average above 250 nits (LPL), and 240 nits (AUO) nits at centre of the screen.

Apply the Fig 1; it should comply with the following formula:

Minimum luminance of nine points (brightness)

X100% (Min.)

Maximum luminance of nine points (brightness)

LM201W01-SLA1 (LPL)-----70% (min.)

M201EW01 v0 (AUO)-----70% (min.), 75% (typ.)

4.6 Check Cross talk (S)

Apply Pattern 2. Set contrast and brightness at 100 %. Measure YA. Then output Pattern 3 and measure YB. the cross talk value :

ABS (YA - YB)

YA

X 100%

LM201W01-SLA1 (LPL)-----1.8% (max)

M201EW01 v0 (AUO)----- 1.5% (max.)

4.7 White color adjustment

There are three factory preset white color 9300K, 6500K, sRGB.

Apply full gray64 pattern, with brightness in 100 % position and the contrast control at 50 % position.

The 1931 CIE Chromaticity (color triangle) diagram (x,y) coordinate for the screen center should be:

9300K CIE coordinates

X = 0.283 +/- 0.020

Y = 0.297 +/- 0.020

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Gross weight : 10.7 KG

5.4.2 Block unit / Palletization

layers/ block	sets/ layer	sets/ block unit
8	4	32

6.0 Environmental characteristics

The following sections define the interference and susceptibility condition limits that might occur between external environment and the display device.

6.1 Susceptibility of display to external environment

Operating

- Temperature : 0 to 40 degree C
- Humidity : 80% max
- Altitude : 0-3658m

Storage

- Air pressure : 600-1100 mBAR

- Temperature : -20 to 60 degree C
- Humidity : 95% max (< 40°C)
- Altitude : 0-12192m
- Air pressure : 300-1100 mBAR

Note: recommend at 5 to 35°C, Humidity less than 60 %

6.2 Transportation tests

6.3

Standard		Philips UAN-D1400	NSTA
Drop Test	Height	76.2cm(1~9.52kg) 61 cm (9.53~18.59kg)	76.2cm(1~9.52kg) 61 cm (9.53~18.59kg)
	Sequence	1 corner 3 faces After -10°C	1 corner 3 edge 6 face
	Test Result	Electrical function ok Mechanical function ok No serious damage on set appearance (Room temp. /-10℃ c, humidity 70 %)	
Vibration Test	Sequence	Packaging: 5-200 Hz 0.73 G 30 min. for each axis	Operating: 10-50-10 Hz 0.35 mm 30 min. for each axis
	Test Result	Electrical function ok Mechanical function ok No serious damage on set appearance	
Shock	For design evaluation only Operating		

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test	30 G, 16 m-sec, 6 cycles Temperature : 23°C Humidity : 60 % Air pressure : 100 kpa (According to DSD draft standard UAN-D636)
------	---

6.3 Display disturbances from external environment
According to IEC 801-2 for ESD disturbances

6.4 Display disturbances to external environment

6.4.1 EMI

EMI : C-tick, CE(Europe), FCC(USA), IC(Canada), VCCI(Japan), BSMI

7.0 Reliability

7.1 Mean Time Between Failures

System MTBF (Excluding the LCD panel and CCFL): 50,000 hrs
CCFL MTBF: 40,000 hrs

8.0 Quality assurance requirements

8.1 Acceptance test

According to MIL-STD-105D Control II level

AQL: 0.65 (major)
2.50 (minor)

(Please also refer to annual quality agreement)

Customer acceptance criteria: UAW0377/00

9.0 Serviceability

The serviceability of this monitor should fulfill the requirements which are prescribed in UAW-0346 and must be checked with the check list UAT-0361.

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10. LCD PANEL CHARACTERISTICS REQUIREMENTS

LCD Panel Pixel Defect Requirement

	Acceptable Level
Bright Dot Defects	
1 lit subpixel	3
2 adjacent lit subpixels	1
3 adjacent lit subpixels (one white pixel)	0
Distance between two bright dot defects	25mm or more
Bright dot defects within 20mm circle	3 or fewer
Total bright dot defects of all types	3
Dark Dot Defects	
1 dark subpixel	5
2 adjacent dark subpixels	2

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3 adjacent dark subpixels (one white pixel)	1
Distance between two black dot defects	15mm or more
Total black dot defects of all types	5
Total bright or black dot defects of all types	5

*Note: 1 or 2 adjacent subpixel defects= 1 dot defect

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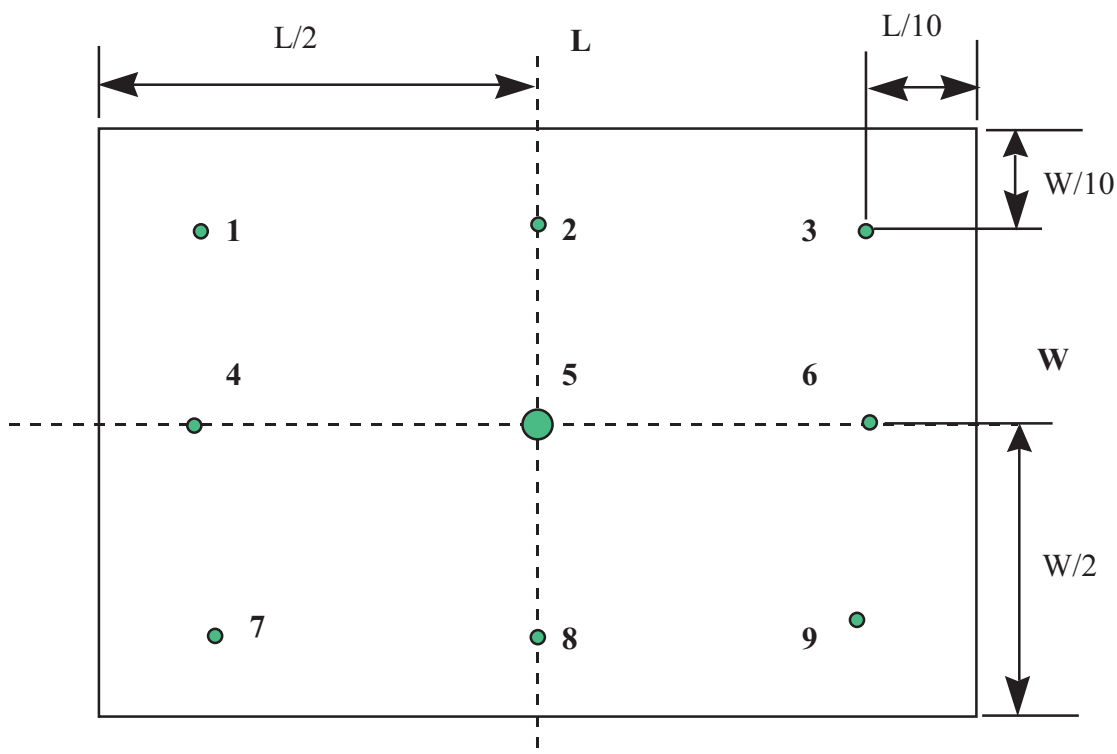
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Fig 1: Brightness Uniformity



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Fig 2: Cross talk pattern

Gray level 46 (64 Gray level)

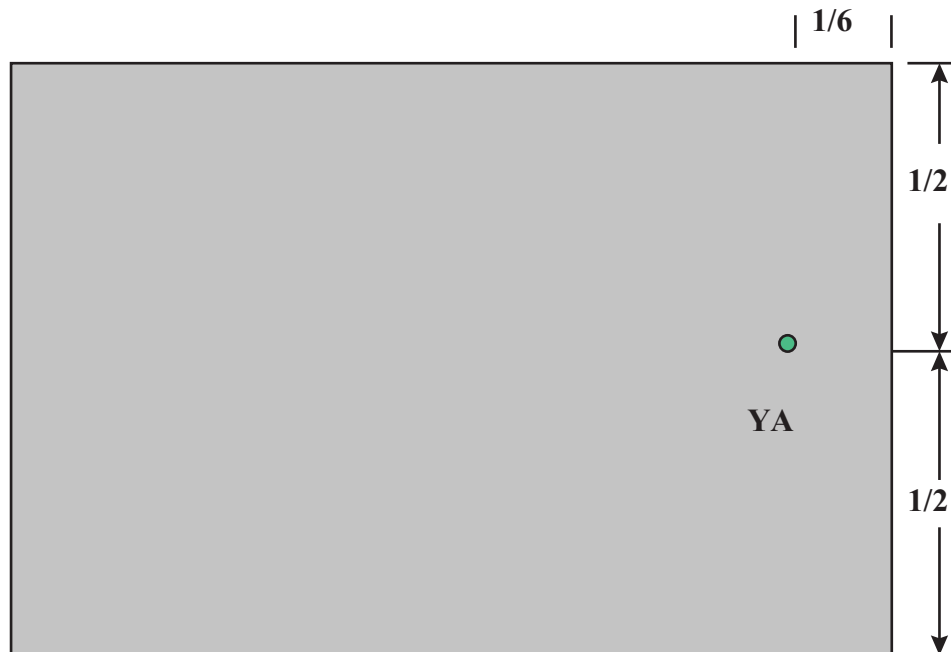
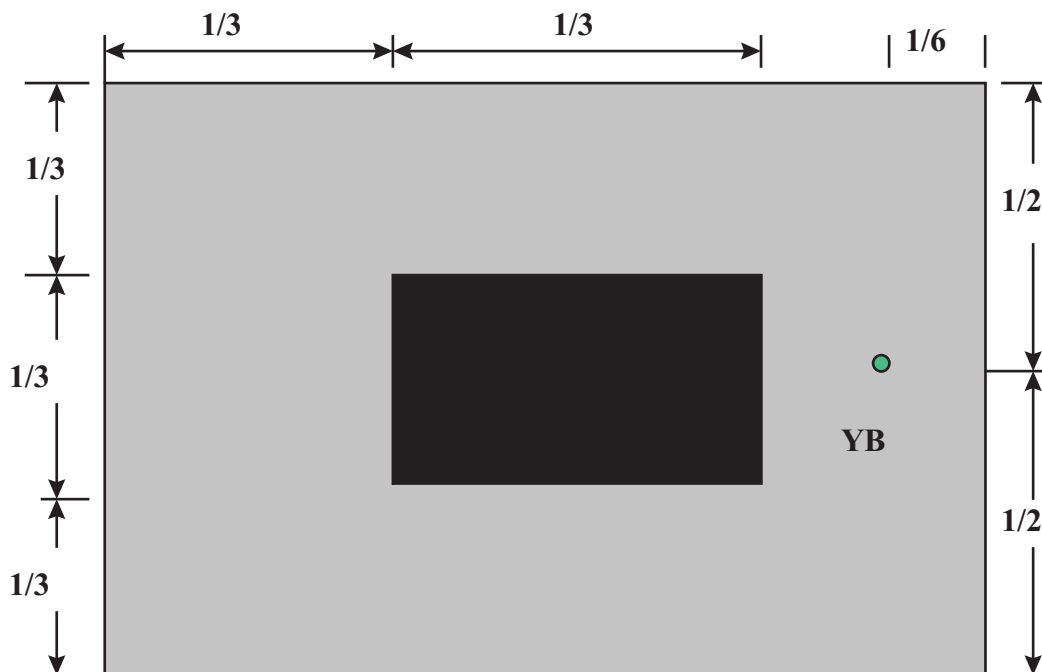


Fig 3: Cross-talk Pattern

Center at Gray level 0 (Black)



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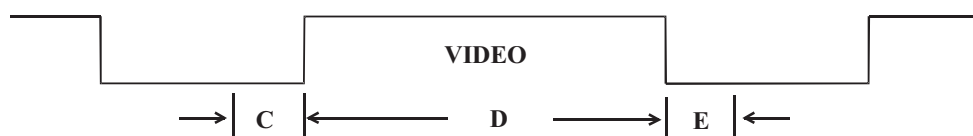
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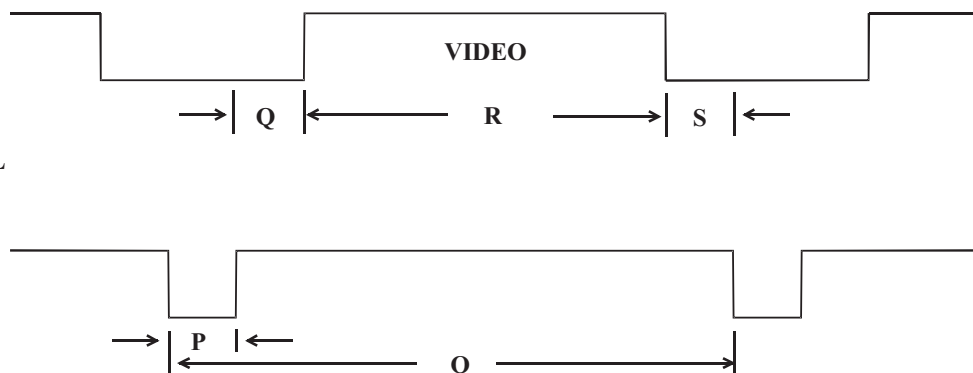
SEPARATE SYNC.



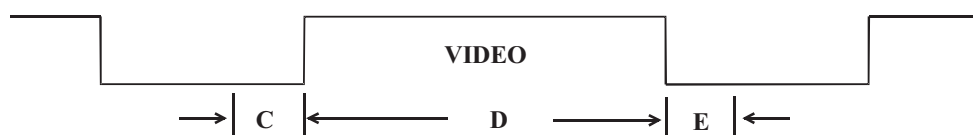
HORIZONTAL



VERTICAL



COMPOSITE SYNC.



HORIZONTAL



FIG-4 TIMING CHART -1

CLASS NO.

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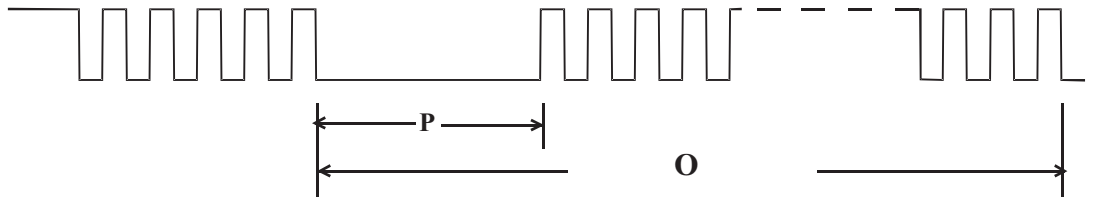
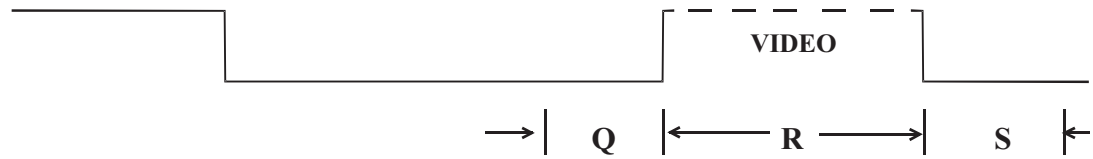
PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.

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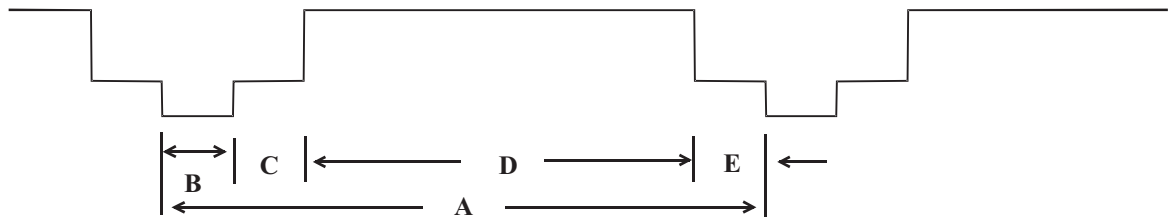
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VERTICAL



COMPOSITE SYNC. & VIDEO
(SYNC. ON GREEN)

HORIZONTAL



VERTICAL

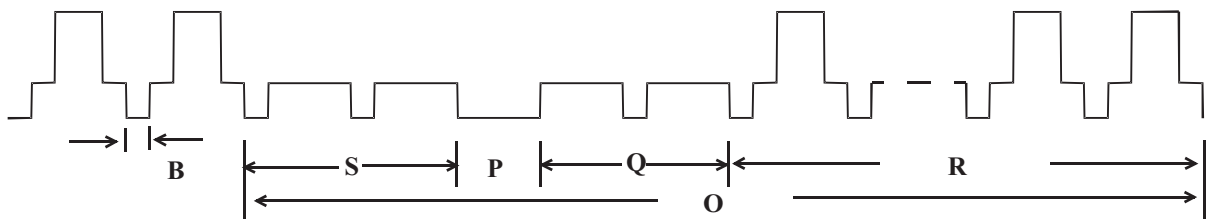


FIG-5 TIMING CHART -2

CLASS NO.		20.1" TFT UXGA LCD Monitor (HUDSON 7-200WP7) TYPE : 200WP7ES/00 BRAND : PHILIPS			8639 000 16908						
2006-02-16											
NAME Jason Wang		SUPERS.		25		590 — 25		10		A4	
TY		CHECK		DATE 2006-02-16		Property of PHILIPS ELECTRONICS INDUSTRIES (TAIWAN) LTD.-B.E.					

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0004	313815761011	SUPER ERGO BASE ASSY	
0030	313815761221	BEZEL ASSY-SILVER	
0031	313815418091	BEZEL-SLIVER	
0032	313815417771	BEZEL- DECO	
0033	313815417781	CONTROL KNOB	
0040	313815761001	BACK COVER ASSY-S	
0041	313815417791	BACK COVER	
0042	313815417811	MIDDLE COVER-SILVER	
0043	313815133511	VESA PLATE	
0051	313815138241	METAL FRAME	
7201	932214526668	IC SM M24C02-WMN6	(ST00) R
7202	932214526668	IC SM M24C02-WMN6	(ST00) R
7351	313815867291	CPU IC ASSY	
7351	932222343682	IC SM NT68F631ALG	(NOVA) L
7353	313815867301	EEPROM IC ASSY	
7353	932214725682	IC M24C16-WBN6P	(ST00) L
7401	823827737015	SCALER IC NT68563HFG	
7403	932220099685	IC SM LD1117AS18	(ST00) R
7405	932216733668	IC SM LD1117S33	(ST00) R
7501	933769900215	TRA SIG SM BC857C	(PHSE) R
7502	933769900215	TRA SIG SM BC857C	(PHSE) R
7503	932217440685	TRA SIG SM KRC102S	(KEC0) R
7504	932216638668	FET POW SM SI5441DC-E3	(VISH)R
7505	932216638668	FET POW SM SI5441DC-E3	(VISH)R
7506	932217440685	TRA SIG SM KRC102S	(KEC0) R
7507	932216733668	IC SM LD1117S33	(ST00) R
7508	932216638668	FET POW SM SI5441DC-E3	(VISH)R
7509	932217440685	TRA SIG SM KRC102S	(KEC0) R
7622	932217440685	TRA SIG SM KRC102S	(KEC0) R
7625	932216638668	FET POW SM SI5441DC-E3	(VISH)R
7631	932222352668	IC SM TPS54357PWP	(TI00) R
7651	932222162671	IC SM CY7C65640-LFXC	(CYPR) Y
7671	932222269668	IC SM TPS2062DG4	(TI00) R
7675	932222269668	IC SM TPS2062DG4	(TI00) R

Spare Parts List

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Model:200WP7ES/00(AUO Panel)

Mechanical Parts

0004	313815761011	SUPER ERGO BASE ASSY
0030	313815761221	BEZEL ASSY-SILVER
0031	313815418091	BEZEL-SILVER
0032	313815417771	BEZEL- DECO
0033	313815417781	CONTROL KNOB
0040	313815761001	BACK COVER ASSY-S
0041	313815417791	BACK COVER
0042	313815417811	MIDDLE COVER-SILVER
0043	313815133511	VESA PLATE
0051	313815138241	METAL FRAME
0053	313815321301	INSULATING PLATE
0080	313815759083	SHIELDING ASSY
0090	313815136711	AC PLATE
0095	313815136721	DSUB PLATE
0126	313815569471	RATING LABEL
0280	313800991971	PROCESS BOX
0290	313800992071	PROCESS BOX
0340	313815136703	SHIELDING
0341	313815421312	INSULATING PLATE
0502	313815641931	SLEEVE
1057	313815867411	FRAME+WIRE ASSY

LCD Panel

1050	823827720701	TFT-LCD MOD M201EW01 V.0 A
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Packing

0129	313810632613	PE BAG
0450	313815642281	CARTON-200WP
0451	313815642231	CUSHION - TOP
0452	313815642241	CUSHION - BUTTON
0453	313815641821	P.E. BAG
0508	313815642281	CARTON-200WP

Accessory

0141	313815524341	QUICK SETUP GUIDE-200WP
0602	313811709411	E-D.F.U.
1056	823827732068	CBLE-130 30/115/30 334033AWG28
1060	313819871431	CORD SUB-D 15/1M8/15 D-SUB BK
1061	313818870471	MAINSCORD IEC 10A 1M8 DET BK
1063	313819872531	CORD USB A/1M8/USB B BK
1064	313819871471	CORD DVI 18+1/1M8/DVI 18+1 BK

PCB ASSY

1051	313815867281	SCALER ASSY-200WP7 AUO
1052	313815865861	CONTROL ASSY
1054	313815867111	USB ASSY(200 WP7)
1055	823827732047	PSU OPENFR IPS60W(EADP-57BFAA

Miscellanea

0138	313815555711	HI-POT LABEL
0280	313800991971	PROCESS BOX
0291	313815569531	LABEL
0292	313815569531	LABEL
0615	313811709541	HEX CODE OF F/W(NO MATE REQ)
1098	243803100435	SOC IC V 8P F 2.54 DIL L
1201	242203300521	SOC DVI H 24P F 1.91DVI-D Y
1202	242202518053	SOC SUBD H 15P F BU 1216 B
1351	243854300079	RES XTL SM 12MHZ 32P SMD-49 R
1352	242202518947	CON V 4P M 2.50 64834 B
1354	242202518947	CON V 4P M 2.50 64834 B
1401	242202518804	CON V 30P M 1.25 SM 60948 R
1501	242202518825	CON V 13P M 2.00 63393 B
1505	242202518824	CON V 11P M 2.00 63391 B
1601	242202518896	CON H 6P M 2.00 63366 B
1608	823827732071	CABLE RING TERM/45/FAST AWG18
1609	823827732069	CABLE RING TERM/85/FAST AWG18
1610	243854300085	RES XTL SM 24MHZ 20P SMD-49 R
1651	242202518953	SOC USB V 4P F 2.0/2.5 5401 Y
1652	242202518955	SOC USB V 4P F 2.5 5411 Y
1653	242202518957	SOC USB V 8P F 2.0/2.5 5402 R
1654	242202518953	SOC USB V 4P F 2.0/2.5 5401 Y
1951	243812800196	SWI TACT H=5 GY 160G SKHHAM B
1952	243812800196	SWI TACT H=5 GY 160G SKHHAM B
1953	243812800196	SWI TACT H=5 GY 160G SKHHAM B
1954	243812800196	SWI TACT H=5 GY 160G SKHHAM B
1955	243812800196	SWI TACT H=5 GY 160G SKHHAM B
1956	243812800196	SWI TACT H=5 GY 160G SKHHAM B
1957	243812800196	SWI TACT H=5 GY 160G SKHHAM B
1960	243812800196	SWI TACT H=5 GY 160G SKHHAM B
1961	242202518897	CON H 7P M 2.00 63367 B
4444	313810610503	CD ROM - SERVICE MANUAL
4444	313810610504	SERVICE MANUAL
8061	823827732072	CBLE-023 13/390/7+6-017-016

PCB ASSY

1051	313815867281	SCALER ASSY-200WP7 AUO
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2201	223878615649	CER2 0603 X7R 16V 100N PM10 R
2202	223878615649	CER2 0603 X7R 16V 100N PM10 R
2203	223886715331	CER1 0603 NP0 50V 330P PM5 R
2204	223886715331	CER1 0603 NP0 50V 330P PM5 R
2205	223878615649	CER2 0603 X7R 16V 100N PM10 R
2214	223878615649	CER2 0603 X7R 16V 100N PM10 R
2215	223886715331	CER1 0603 NP0 50V 330P PM5 R
2216	223886715331	CER1 0603 NP0 50V 330P PM5 R
2217	223886715339	CER1 0603 NP0 50V 33P PM5 R
2218	223886715221	CER1 0603 NP0 50V 220P PM5 R
2219	223878615649	CER2 0603 X7R 16V 100N PM10 R
2221	223878615645	CER2 0603 X7R 16V 47N PM10 R
2222	223878615645	CER2 0603 X7R 16V 47N PM10 R
2224	223878615645	CER2 0603 X7R 16V 47N PM10 R
2225	223878615645	CER2 0603 X7R 16V 47N PM10 R
2227	223878615645	CER2 0603 X7R 16V 47N PM10 R
2228	223878615645	CER2 0603 X7R 16V 47N PM10 R
2229	223878615649	CER2 0603 X7R 16V 100N PM10 R
2241	223878615645	CER2 0603 X7R 16V 47N PM10 R
2351	223878615649	CER2 0603 X7R 16V 100N PM10 R
2353	223886715229	CER1 0603 NP0 50V 22P PM5 R
2354	223886715229	CER1 0603 NP0 50V 22P PM5 R
2356	223878615649	CER2 0603 X7R 16V 100N PM10 R
2358	223886715101	CER1 0603 NP0 50V 100P PM5 R
2359	823827736009	CHIP 4.7UF 25V X7R 1206
2360	223878615649	CER2 0603 X7R 16V 100N PM10 R
2361	223886715101	CER1 0603 NP0 50V 100P PM5 R
2364	223886715229	CER1 0603 NP0 50V 22P PM5 R
2401	202203100205	ELCAP SM RVS 25V 47U PM20 R
2402	223878615649	CER2 0603 X7R 16V 100N PM10 R
2404	223878615649	CER2 0603 X7R 16V 100N PM10 R
2406	223878615649	CER2 0603 X7R 16V 100N PM10 R
2413	202203100205	ELCAP SM RVS 25V 47U PM20 R
2414	223878615649	CER2 0603 X7R 16V 100N PM10 R
2416	223878615649	CER2 0603 X7R 16V 100N PM10 R
2417	223878615649	CER2 0603 X7R 16V 100N PM10 R
2419	223878615649	CER2 0603 X7R 16V 100N PM10 R
2420	823827736009	CHIP 4.7UF 25V X7R 1206
2422	223878615649	CER2 0603 X7R 16V 100N PM10 R
2423	823827736009	CHIP 4.7UF 25V X7R 1206
2424	223878615649	CER2 0603 X7R 16V 100N PM10 R
2425	202203100205	ELCAP SM RVS 25V 47U PM20 R
2427	223878615649	CER2 0603 X7R 16V 100N PM10 R
2428	223878615649	CER2 0603 X7R 16V 100N PM10 R
2431	223878615649	CER2 0603 X7R 16V 100N PM10 R
2443	223878615649	CER2 0603 X7R 16V 100N PM10 R
2444	223878615649	CER2 0603 X7R 16V 100N PM10 R
2446	223878615649	CER2 0603 X7R 16V 100N PM10 R
2451	223878615649	CER2 0603 X7R 16V 100N PM10 R
2452	223878615649	CER2 0603 X7R 16V 100N PM10 R
2455	823827736009	CHIP 4.7UF 25V X7R 1206
2457	223878615649	CER2 0603 X7R 16V 100N PM10 R
2458	823827736009	CHIP 4.7UF 25V X7R 1206
2459	223878615649	CER2 0603 X7R 16V 100N PM10 R
2501	223878615649	CER2 0603 X7R 16V 100N PM10 R
2502	223878615649	CER2 0603 X7R 16V 100N PM10 R
2503	202203100205	ELCAP SM RVS 25V 47U PM20 R
2504	223878615649	CER2 0603 X7R 16V 100N PM10 R
2505	223878615649	CER2 0603 X7R 16V 100N PM10 R
2506	202203100205	ELCAP SM RVS 25V 47U PM20 R
2510	223878615649	CER2 0603 X7R 16V 100N PM10 R
2511	223878615649	CER2 0603 X7R 16V 100N PM10 R
2515	223878615649	CER2 0603 X7R 16V 100N PM10 R
2516	223878615649	CER2 0603 X7R 16V 100N PM10 R
2517	223878615649	CER2 0603 X7R 16V 100N PM10 R
2518	223878615649	CER2 0603 X7R 16V 100N PM10 R
2519	223878615649	CER2 0603 X7R 16V 100N PM10 R
2520	223878615645	CER2 0603 X7R 16V 47N PM10 R
2521	202203100205	ELCAP SM RVS 25V 47U PM20 R
2522	223878615649	CER2 0603 X7R 16V 100N PM10 R
2523	223878615649	CER2 0603 X7R 16V 100N PM10 R
2524	223878615645	CER2 0603 X7R 16V 47N PM10 R
2525	202203100205	ELCAP SM RVS 25V 47U PM20 R
2526	223878615645	CER2 0603 X7R 16V 47N PM10 R
2527	202203100205	ELCAP SM RVS 25V 47U PM20 R
2529	823827736009	CHIP 4.7UF 25V X7R 1206
2530	223878615649	CER2 0603 X7R 16V 100N PM10 R
2531	823827736009	CHIP 4.7UF 25V X7R 1206

3201	232270260103	RST SM 0603 RC21 10K PM5 R
3202	212211805656	RST SM 0603 RC0603 1K PM5 R
3203	212211805656	RST SM 0603 RC0603 1K PM5 R

3207	232270260103	RST SM 0603 RC21	10K PM5 R
3208	232270260103	RST SM 0603 RC21	10K PM5 R
3209	232270260103	RST SM 0603 RC21	10K PM5 R
3210	232270260223	RST SM 0603 RC21	22K PM5 R
3211	232270260101	RST SM 0603 RC21	100R PM5 R
3212	232270260101	RST SM 0603 RC21	100R PM5 R
3213	232270260101	RST SM 0603 RC21	100R PM5 R
3214	232270260101	RST SM 0603 RC21	100R PM5 R
3229	232270260103	RST SM 0603 RC21	10K PM5 R
3230	232270260103	RST SM 0603 RC21	10K PM5 R
3231	232270260759	RST SM 0603 RC21	75R PM5 R
3233	232270260103	RST SM 0603 RC21	10K PM5 R
3234	232270260223	RST SM 0603 RC21	22K PM5 R
3235	232270260101	RST SM 0603 RC21	100R PM5 R
3236	232270260101	RST SM 0603 RC21	100R PM5 R
3237	232270260101	RST SM 0603 RC21	100R PM5 R
3238	232270260101	RST SM 0603 RC21	100R PM5 R
3239	232270260101	RST SM 0603 RC21	100R PM5 R
3240	232270260101	RST SM 0603 RC21	100R PM5 R
3241	212211805661	RST SM 0603 RC0603	2K2 PM5 R
3242	212211805661	RST SM 0603 RC0603	2K2 PM5 R
3243	212211805964	RST SM 0603 RC0603	75R PM1 R
3244	232270260759	RST SM 0603 RC21	75R PM5 R
3247	232270260471	RST SM 0603 RC21	470R PM5 R
3248	212211805964	RST SM 0603 RC0603	75R PM1 R
3249	232270260759	RST SM 0603 RC21	75R PM5 R
3251	232270260759	RST SM 0603 RC21	75R PM5 R
3252	232270260759	RST SM 0603 RC21	75R PM5 R
3253	212211805964	RST SM 0603 RC0603	75R PM1 R
3254	232270260759	RST SM 0603 RC21	75R PM5 R
3255	212211805656	RST SM 0603 RC0603	1K PM5 R
3256	232270260103	RST SM 0603 RC21	10K PM5 R
3258	232270260223	RST SM 0603 RC21	22K PM5 R
3259	232270260223	RST SM 0603 RC21	22K PM5 R
3261	232270296001	RST SM 0603 JUMP.	MAX 0R05 R
3262	232270296001	RST SM 0603 JUMP.	MAX 0R05 R
3263	232270296001	RST SM 0603 JUMP.	MAX 0R05 R
3351	212211805689	RST SM 0603 RC0603	1M PM5 R
3353	232270260103	RST SM 0603 RC21	10K PM5 R
3354	232270260101	RST SM 0603 RC21	100R PM5 R
3359	232270260101	RST SM 0603 RC21	100R PM5 R
3368	232270260101	RST SM 0603 RC21	100R PM5 R
3369	232270260101	RST SM 0603 RC21	100R PM5 R
3370	232270260103	RST SM 0603 RC21	10K PM5 R
3371	232270260103	RST SM 0603 RC21	10K PM5 R
3372	232270260103	RST SM 0603 RC21	10K PM5 R
3373	232270260101	RST SM 0603 RC21	100R PM5 R
3374	232270260101	RST SM 0603 RC21	100R PM5 R
3375	232270260101	RST SM 0603 RC21	100R PM5 R
3379	232270260101	RST SM 0603 RC21	100R PM5 R
3391	232270296001	RST SM 0603 JUMP.	MAX 0R05 R
3392	232270296001	RST SM 0603 JUMP.	MAX 0R05 R
3401	232270463901	RST SM 0603 RC22H	390R PM1 R
3413	232270260103	RST SM 0603 RC21	10K PM5 R
3416	232270260101	RST SM 0603 RC21	100R PM5 R
3419	232270260101	RST SM 0603 RC21	100R PM5 R
3501	232270260479	RST SM 0603 RC21	47R PM5 R
3502	232270260479	RST SM 0603 RC21	47R PM5 R
3503	232270260479	RST SM 0603 RC21	47R PM5 R
3504	232270260103	RST SM 0603 RC21	10K PM5 R
3506	232270260101	RST SM 0603 RC21	100R PM5 R
3507	232270260101	RST SM 0603 RC21	100R PM5 R
3508	232270260101	RST SM 0603 RC21	100R PM5 R
3509	232270260221	RST SM 0603 RC21	220R PM5 R
3510	232270260103	RST SM 0603 RC21	10K PM5 R
3511	232270260221	RST SM 0603 RC21	220R PM5 R
3512	232270260103	RST SM 0603 RC21	10K PM5 R
3515	232270260103	RST SM 0603 RC21	10K PM5 R
3516	232270260103	RST SM 0603 RC21	10K PM5 R
3517	212211805683	RST SM 0603 RC0603	100K PM5 R
3518	232270260103	RST SM 0603 RC21	10K PM5 R
3519	232270260103	RST SM 0603 RC21	10K PM5 R
3520	232270260103	RST SM 0603 RC21	10K PM5 R
3521	212211805683	RST SM 0603 RC0603	100K PM5 R
3522	232270260103	RST SM 0603 RC21	10K PM5 R
3523	232270260223	RST SM 0603 RC21	22K PM5 R
3524	232270260103	RST SM 0603 RC21	10K PM5 R
3525	232270260103	RST SM 0603 RC21	10K PM5 R
3526	232270260103	RST SM 0603 RC21	10K PM5 R
3527	232270260103	RST SM 0603 RC21	10K PM5 R
3528	212211805683	RST SM 0603 RC0603	100K PM5 R
3529	232270260103	RST SM 0603 RC21	10K PM5 R
3534	232270296001	RST SM 0603 JUMP.	MAX 0R05 R
3537	232270296001	RST SM 0603 JUMP.	MAX 0R05 R

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3540	232270296001	RST SM 0603 JUMP. MAX 0R05 R	
5201	242254944196	IND FXD 0805 EMI 100MHZ 120R R	
5202	242254944196	IND FXD 0805 EMI 100MHZ 120R R	
5204	242254944196	IND FXD 0805 EMI 100MHZ 120R R	
5351	242254944196	IND FXD 0805 EMI 100MHZ 120R R	
5401	242254944196	IND FXD 0805 EMI 100MHZ 120R R	
5402	242254944196	IND FXD 0805 EMI 100MHZ 120R R	
5403	242254944196	IND FXD 0805 EMI 100MHZ 120R R	
5407	242254944196	IND FXD 0805 EMI 100MHZ 120R R	
5409	242254944196	IND FXD 0805 EMI 100MHZ 120R R	
5410	242254900113	IND FXD 0603 EMI 100MHZ 1K R	
5413	242254945579	IND FXD 1206 EMI 100MHZ 100R R	
5501	242254945579	IND FXD 1206 EMI 100MHZ 100R R	
5502	242254945579	IND FXD 1206 EMI 100MHZ 100R R	
6201	933913910115	DIO SIG SM BAS32L (PHSE) R	
6202	933913910115	DIO SIG SM BAS32L (PHSE) R	
6203	933913910115	DIO SIG SM BAS32L (PHSE) R	
6204	933913910115	DIO SIG SM BAS32L (PHSE) R	
6401	932220675682	DIO REC M100AL-5301-E3 (VISH)B	
6402	932220675682	DIO REC M100AL-5301-E3 (VISH)B	
6403	932220628682	DIO REC SB140AL-5301E3 (VISH)B	
7201	932214526668	IC SM M24C02-WMN6 (ST00) R	
7202	932214526668	IC SM M24C02-WMN6 (ST00) R	
7351	313815867291	CPU IC ASSY	
7351	932222343682	IC SM NT68F631ALG (NOVA) L	
7353	313815867301	EEPROM IC ASSY	
7353	932214725682	IC M24C16-WBNGP (ST00) L	
7401	823827737015	SCALER IC NT68563HFG	
7403	932220099685	IC SM LD1117AS18 (ST00) R	
7405	932216733668	IC SM LD1117S33 (ST00) R	
7501	933769900215	TRA SIG SM BC857C (PHSE) R	
7502	933769900215	TRA SIG SM BC857C (PHSE) R	
7503	932217440685	TRA SIG SM KRC102S (KEC0) R	
7504	932216638668	FET POW SM Si5441DC-E3 (VISH)R	
7505	932216638668	FET POW SM Si5441DC-E3 (VISH)R	
7506	932217440685	TRA SIG SM KRC102S (KEC0) R	
7507	932216733668	IC SM LD1117S33 (ST00) R	
7508	932216638668	FET POW SM Si5441DC-E3 (VISH)R	
7509	932217440685	TRA SIG SM KRC102S (KEC0) R	
1052	313815865861	CONTROL ASSY	
2951	223858619812	CER2 0603 Y5V 50V 100N P8020 R	
2952	223858619812	CER2 0603 Y5V 50V 100N P8020 R	
3951	232270260101	RST SM 0603 RC21 100R PM5 R	
3952	232270260473	RST SM 0603 RC21 47K PM5 R	
3953	232270260103	RST SM 0603 RC21 10K PM5 R	
3954	212211805656	RST SM 0603 RC0603 1K PM5 R	
3955	232270260473	RST SM 0603 RC21 47K PM5 R	
3956	232270260103	RST SM 0603 RC21 10K PM5 R	
3957	212211805656	RST SM 0603 RC0603 1K PM5 R	
6951	932214603682	LED VS L-3WYGW (KIEL) B	
1054	313815867111	USB ASSY(200 WP7)	
2601	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2603	202203100179	ELCAP SM HV 25V 10U PM20 R	
2604	223858619812	CER2 0603 Y5V 50V 100N P8020 R	
2621	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2623	223858615636	CER2 0603 X7R 50V 10N PM10 R	
2625	222224119876	CER2 1206 Y5V 10V 10U P8020 R	
2631	202202000963	ELCAP SM LV 25V 100U PM20 R	
2633	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2634	202202000963	ELCAP SM LV 25V 100U PM20 R	
2635	223878615643	CER2 0603 X7R 16V 33N PM10 R	
2636	222278015663	CER2 0805 X7R 16V 1U PM10 R	
2651	202001293803	ELCAP SM RV2 16V 100U PM20 R	
2652	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2655	202001293803	ELCAP SM RV2 16V 100U PM20 R	
2656	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2661	202001293803	ELCAP SM RV2 16V 100U PM20 R	
2662	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2665	202001293803	ELCAP SM RV2 16V 100U PM20 R	
2666	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2671	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2675	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2680	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2681	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2682	223886715279	CER1 0603 NP0 50V 27P PM5 R	

2683	223886715279	CER1 0603 NP0 50V 27P PM5 R	
2684	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2685	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2691	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2692	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2693	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2694	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2695	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2696	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2697	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2698	223878615649	CER2 0603 X7R 16V 100N PM10 R	
2699	223878615649	CER2 0603 X7R 16V 100N PM10 R	
3622	232270260103	RST SM 0603 RC21 10K PM5 R	
3623	212211805683	RST SM 0603 RC0603 100K PM5 R	
3634	232270260202	RST SM 0603 RC21 2K PM5 R	
3681	212211805672	RST SM 0603 RC0603 15K PM5 R	
3682	212211805683	RST SM 0603 RC0603 100K PM5 R	
3683	212211805672	RST SM 0603 RC0603 15K PM5 R	
3685	212211805672	RST SM 0603 RC0603 15K PM5 R	
3687	212211805672	RST SM 0603 RC0603 15K PM5 R	
3689	212211805672	RST SM 0603 RC0603 15K PM5 R	
3691	212211805672	RST SM 0603 RC0603 15K PM5 R	
3692	212211805672	RST SM 0603 RC0603 15K PM5 R	
3693	212211805672	RST SM 0603 RC0603 15K PM5 R	
4631	232270296001	RST SM 0603 JUMP. MAX 0R05 R	
5601	242254900126	IND FXD 0805 EMI 100MHZ 120R R	
5602	242254900126	IND FXD 0805 EMI 100MHZ 120R R	
5603	242254900126	IND FXD 0805 EMI 100MHZ 120R R	
5621	242254900126	IND FXD 0805 EMI 100MHZ 120R R	
5622	242254900126	IND FXD 0805 EMI 100MHZ 120R R	
5634	313818875771	COI CHOKE 35UH 82M OHM DR10X8	
5651	242254900126	IND FXD 0805 EMI 100MHZ 120R R	
5653	242254900126	IND FXD 0805 EMI 100MHZ 120R R	
5655	242254900126	IND FXD 0805 EMI 100MHZ 120R R	
5657	242254900126	IND FXD 0805 EMI 100MHZ 120R R	
5659	242254900126	IND FXD 0805 EMI 100MHZ 120R R	
6634	932221745685	DIO REC SM SSA34-E3 (VISH) R	
6635	932221745685	DIO REC SM SSA34-E3 (VISH) R	
6662	933913910115	DIO SIG SM BAS32L (PHSE) R	
7622	932217440685	TRA SIG SM KRC102S (KEC0) R	
7625	932216638668	FET POW SM Si5441DC-E3 (VISH)R	
7631	932222352668	IC SM TPS54357PWP (TI00) R	
7651	932222162671	IC SM CY7C65640-LFXC (CYPR) Y	
7671	932222269668	IC SM TPS2062DG4 (TI00) R	
7675	932222269668	IC SM TPS2062DG4 (TI00) R	

According to the ECO CA005895,the panel has been replaced by MOD M201EW01 V.3 ,the updated parts as below:

Action	Item	12NC	Description
From	1050	823827720701	TFT-LCD MOD M201EW01 V.0 A
To	1050	823827720911	TFT-LCD MOD M201EW01 V.3
New	3533	212211805631	RST SM 0603 JUMP. MAX 0R05 R
		232270296001	RST SM 0603 JUMP. MAX 0R05 R
Del	3537	212211805631	RST SM 0603 JUMP. MAX 0R05 R
		232270296001	RST SM 0603 JUMP. MAX 0R05 R

Spare Parts List

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Model:200WP7ES/01(LPL Panel) 12NC: 8639 000 17096

Mechanical Parts

4	313815761011	SUPER ERGO BASE ASSY
30	313815761221	BEZEL ASSY-SILVER
31	313815418091	BEZEL-SLIVER
32	313815417771	BEZEL- DECO
33	313815417781	CONTROL KNOB
40	313815761001	BACK COVER ASSY-S
41	313815417791	BACK COVER
42	313815417811	MIDDLE COVER-SILVER
43	313815133511	VESA PLATE
44	313815162071	CONTACT SPRING
51	313815138241	METAL FRAME
80	313815759083	SHIELDING ASSY
116	313810440571	HOUSING COVER
340	313815136703	SHIELDING
450	313815642281	CARTON-200WP
1057	313815867411	FRAME+WIRE ASSY

Packing Parts

450	313815642281	CARTON-200WP
451	313815642231	CUSHION - TOP
452	313815642241	CUSHION - BUTTON
453	313815641821	P.E. BAG

Accessory

602	313811709571	E-D.F.U.
1060	313818873992	CORD SUB-D 15/1M8/15 SUB-D M/
1061	313818870471	MAINSCORD IEC 10A 1M8 DET B
1063	313819872531	CORD USB A/1M8/USB B BK
1064	313819871471	CORD DVI 18+1/1M8/DVI 18+1 BK

miscellanea

341	313815421312	INSULATING PLATE
1056	823827732068	CBLE-130 30/115/30 334033AWG2
8061	823827732072	CBLE-023 13/390/7+6-017-016

LCD Panel

1050	823827718711	LCD LM201W01-SLA1
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PCB Assy

1051	313815865851	SCALER ASSY(200WP7)
1052	313815865861	CONTROL ASSY
1054	313815867111	USB ASSY(200 WP7)
1055	823827732047	PSU OPENFR IPS60W(EADP-57BFA

PCB Assy

1051	313815865851	SCALER ASSY(200WP7)
various		
291	313815569901	LABEL
292	313815569901	LABEL
615	313811709701	HEX CODE OF F/W(NO MATL REQ)
1098	243803100435	SOC IC V 8P F 2.54 DIL
1099	243803100437	SOC IC V 44P F 1.27 PLCC
1201	242203300521	SOC DVI H 22P F 1.91DVI-D
1202	242202518053	SOC SUBD H 15P F BU 1216
1351	243854300079	RES XTL SM 12MHZ 32P SMD-49
1352	242202518947	CON V 4P M 2.50 64834
1401	243854300093	RES XTL SM 14M3181 18P SMD49
1402	242202518804	CON V 30P M 1.25 SM 60948
1501	242202518825	CON V 13P M 2.00 63393
1505	242202518824	CON V 11P M 2.00 63391



2201	223878615649	CER2 0603 X7R 16V 100N PM10
2202	223878615649	CER2 0603 X7R 16V 100N PM10
2203	223886715331	CER1 0603 NP0 50V 330P PM5
2204	223886715331	CER1 0603 NP0 50V 330P PM5
2205	223878615649	CER2 0603 X7R 16V 100N PM10
2214	223878615649	CER2 0603 X7R 16V 100N PM10
2215	223886715331	CER1 0603 NP0 50V 330P PM5
2216	223886715331	CER1 0603 NP0 50V 330P PM5
2217	223886715339	CER1 0603 NP0 50V 33P PM5
2218	223886715221	CER1 0603 NP0 50V 220P PM5
2219	223878615649	CER2 0603 X7R 16V 100N PM10
2221	223878615645	CER2 0603 X7R 16V 47N PM10
2222	223858615623	CER2 0603 X7R 50V 1N PM10
2224	223878615645	CER2 0603 X7R 16V 47N PM10
2225	223878615645	CER2 0603 X7R 16V 47N PM10

2227	223878615645	CER2 0603 X7R 16V 47N PM10
2228	223878615645	CER2 0603 X7R 16V 47N PM10
2229	223878615649	CER2 0603 X7R 16V 100N PM10
2241	223878615645	CER2 0603 X7R 16V 47N PM10
2302	223878615649	CER2 0603 X7R 16V 100N PM10
2303	202203100198	ELCAP SM HV 16V 22U PM20
2304	223878615649	CER2 0603 X7R 16V 100N PM10
2305	223878615649	CER2 0603 X7R 16V 100N PM10
2306	223878615649	CER2 0603 X7R 16V 100N PM10
2307	223878615649	CER2 0603 X7R 16V 100N PM10
2308	223878615649	CER2 0603 X7R 16V 100N PM10
2309	223878615649	CER2 0603 X7R 16V 100N PM10
2310	223878615649	CER2 0603 X7R 16V 100N PM10
2311	223878615649	CER2 0603 X7R 16V 100N PM10
2312	202203100198	ELCAP SM HV 16V 22U PM20
2313	223878615649	CER2 0603 X7R 16V 100N PM10
2314	223878615649	CER2 0603 X7R 16V 100N PM10
2315	223878615649	CER2 0603 X7R 16V 100N PM10
2316	223878615649	CER2 0603 X7R 16V 100N PM10
2317	223878615649	CER2 0603 X7R 16V 100N PM10
2318	223878615649	CER2 0603 X7R 16V 100N PM10
2319	223878615649	CER2 0603 X7R 16V 100N PM10
2320	223878615649	CER2 0603 X7R 16V 100N PM10
2321	223878615649	CER2 0603 X7R 16V 100N PM10
2322	223878615649	CER2 0603 X7R 16V 100N PM10
2323	223878615649	CER2 0603 X7R 16V 100N PM10
2324	223878615649	CER2 0603 X7R 16V 100N PM10
2325	223878615649	CER2 0603 X7R 16V 100N PM10
2326	223878615649	CER2 0603 X7R 16V 100N PM10
2327	223878615649	CER2 0603 X7R 16V 100N PM10
2328	223878615649	CER2 0603 X7R 16V 100N PM10
2329	223878615649	CER2 0603 X7R 16V 100N PM10
2330	223858615636	CER2 0603 X7R 50V 10N PM10
2332	823827736009	CHIP 4.7UF 25V X7R 1206
2333	823827736009	CHIP 4.7UF 25V X7R 1206
2334	223878615649	CER2 0603 X7R 16V 100N PM10
2351	223878615649	CER2 0603 X7R 16V 100N PM10
2353	223886715229	CER1 0603 NP0 50V 22P PM5
2354	223886715229	CER1 0603 NP0 50V 22P PM5
2356	223878615649	CER2 0603 X7R 16V 100N PM10
2358	223886715101	CER1 0603 NP0 50V 100P PM5
2359	823827736009	CHIP 4.7UF 25V X7R 1206
2360	223878615649	CER2 0603 X7R 16V 100N PM10
2361	223886715101	CER1 0603 NP0 50V 100P PM5
2401	202203100205	ELCAP SM RVS 25V 47U PM20
2402	223878615649	CER2 0603 X7R 16V 100N PM10
2403	823827736009	CHIP 4.7UF 25V X7R 1206
2404	223878615649	CER2 0603 X7R 16V 100N PM10
2405	823827736009	CHIP 4.7UF 25V X7R 1206
2406	223878615649	CER2 0603 X7R 16V 100N PM10
2407	823827736009	CHIP 4.7UF 25V X7R 1206
2408	223878615649	CER2 0603 X7R 16V 100N PM10
2409	823827736009	CHIP 4.7UF 25V X7R 1206
2410	223878615649	CER2 0603 X7R 16V 100N PM10
2411	823827736009	CHIP 4.7UF 25V X7R 1206
2412	223878615649	CER2 0603 X7R 16V 100N PM10
2413	202203100205	ELCAP SM RVS 25V 47U PM20
2414	223878615649	CER2 0603 X7R 16V 100N PM10
2415	823827736009	CHIP 4.7UF 25V X7R 1206
2416	223878615649	CER2 0603 X7R 16V 100N PM10
2417	223878615649	CER2 0603 X7R 16V 100N PM10
2419	223878615649	CER2 0603 X7R 16V 100N PM10
2420	823827736009	CHIP 4.7UF 25V X7R 1206
2421	823827736009	CHIP 4.7UF 25V X7R 1206
2422	223878615649	CER2 0603 X7R 16V 100N PM10
2423	823827736009	CHIP 4.7UF 25V X7R 1206
2424	223878615649	CER2 0603 X7R 16V 100N PM10
2425	223878615649	CER2 0603 X7R 16V 100N PM10
2426	223878615649	CER2 0603 X7R 16V 100N PM10
2427	223878615649	CER2 0603 X7R 16V 100N PM10
2428	223878615649	CER2 0603 X7R 16V 100N PM10
2429	223878615649	CER2 0603 X7R 16V 100N PM10
2430	223878615649	CER2 0603 X7R 16V 100N PM10
2431	223878615649	CER2 0603 X7R 16V 100N PM10
2432	823827736009	CHIP 4.7UF 25V X7R 1206
2433	823827736009	CHIP 4.7UF 25V X7R 1206
2434	223878615649	CER2 0603 X7R 16V 100N PM10
2435	223878615649	CER2 0603 X7R 16V 100N PM10
2436	223878615649	CER2 0603 X7R 16V 100N PM10
2437	223878615649	CER2 0603 X7R 16V 100N PM10
2438	223878615649	CER2 0603 X7R 16V 100N PM10
2439	223878615649	CER2 0603 X7R 16V 100N PM10
2440	223878615649	CER2 0603 X7R 16V 100N PM10
2441	223878615649	CER2 0603 X7R 16V 100N PM10
2442	223878615649	CER2 0603 X7R 16V 100N PM10


2443	223878615649	CER2 0603 X7R 16V 100N PM10
2444	223878615649	CER2 0603 X7R 16V 100N PM10
2445	223878615649	CER2 0603 X7R 16V 100N PM10
2446	223878615649	CER2 0603 X7R 16V 100N PM10
2447	223886715339	CER1 0603 NP0 50V 33P PM5
2448	223886715339	CER1 0603 NP0 50V 33P PM5
2451	223878615649	CER2 0603 X7R 16V 100N PM10
2452	223878615649	CER2 0603 X7R 16V 100N PM10
2453	223878615649	CER2 0603 X7R 16V 100N PM10
2454	223858615636	CER2 0603 X7R 50V 10N PM10
2455	823827736009	CHIP 4.7UF 25V X7R 1206
2456	823827736009	CHIP 4.7UF 25V X7R 1206
2457	223878615649	CER2 0603 X7R 16V 100N PM10
2458	823827736009	CHIP 4.7UF 25V X7R 1206
2459	223878615649	CER2 0603 X7R 16V 100N PM10
2501	223878615649	CER2 0603 X7R 16V 100N PM10
2502	223878615649	CER2 0603 X7R 16V 100N PM10
2503	202203100205	ELCAP SM RVS 25V 47U PM20
2504	223878615649	CER2 0603 X7R 16V 100N PM10
2505	223878615649	CER2 0603 X7R 16V 100N PM10
2506	202203100205	ELCAP SM RVS 25V 47U PM20
2510	223878615649	CER2 0603 X7R 16V 100N PM10
2511	223878615649	CER2 0603 X7R 16V 100N PM10
2515	223878615649	CER2 0603 X7R 16V 100N PM10
2516	223878615649	CER2 0603 X7R 16V 100N PM10
2517	223878615649	CER2 0603 X7R 16V 100N PM10
2518	223878615649	CER2 0603 X7R 16V 100N PM10
2519	223878615649	CER2 0603 X7R 16V 100N PM10
2520	223878615645	CER2 0603 X7R 16V 47N PM10
2521	202203100205	ELCAP SM RVS 25V 47U PM20
2522	223878615649	CER2 0603 X7R 16V 100N PM10
2523	223878615649	CER2 0603 X7R 16V 100N PM10
2524	823827736009	CHIP 4.7UF 25V X7R 1206
2525	823827736009	CHIP 4.7UF 25V X7R 1206
2526	223878615649	CER2 0603 X7R 16V 100N PM10
2529	823827736009	CHIP 4.7UF 25V X7R 1206
2530	223878615649	CER2 0603 X7R 16V 100N PM10
2531	823827736009	CHIP 4.7UF 25V X7R 1206
2538	223878615645	CER2 0603 X7R 16V 47N PM10
2539	223878615645	CER2 0603 X7R 16V 47N PM10













3202	212211805656	RST SM 0603 RC0603 1K PM5
3203	212211805656	RST SM 0603 RC0603 1K PM5
3204	232270260103	RST SM 0603 RC21 10K PM5
3207	232270260103	RST SM 0603 RC21 10K PM5
3208	232270260103	RST SM 0603 RC21 10K PM5
3209	232270260103	RST SM 0603 RC21 10K PM5
3210	232270260223	RST SM 0603 RC21 22K PM5
3211	232270260101	RST SM 0603 RC21 100R PM5
3212	232270260101	RST SM 0603 RC21 100R PM5
3213	232270260101	RST SM 0603 RC21 100R PM5
3214	232270260101	RST SM 0603 RC21 100R PM5
3215	212211805637	RST SM 0603 RC0603 22R PM5
3216	212211805637	RST SM 0603 RC0603 22R PM5
3217	212211805637	RST SM 0603 RC0603 22R PM5
3229	212211805665	RST SM 0603 RC0603 4K7 PM5
3230	212211805665	RST SM 0603 RC0603 4K7 PM5
3231	212211805641	RST SM 0603 RC0603 68R PM5
3233	232270260103	RST SM 0603 RC21 10K PM5
3234	232270260223	RST SM 0603 RC21 22K PM5
3235	232270260101	RST SM 0603 RC21 100R PM5
3236	232270260101	RST SM 0603 RC21 100R PM5
3237	232270260101	RST SM 0603 RC21 100R PM5
3238	232270260101	RST SM 0603 RC21 100R PM5
3239	232270260101	RST SM 0603 RC21 100R PM5
3240	232270260101	RST SM 0603 RC21 100R PM5
3241	212211805661	RST SM 0603 RC0603 2K2 PM5
3242	212211805661	RST SM 0603 RC0603 2K2 PM5
3243	212211805964	RST SM 0603 RC0603 75R PM1
3244	212211805638	RST SM 0603 RC0603 33R PM5
3247	232270260471	RST SM 0603 RC21 470R PM5
3248	212211805964	RST SM 0603 RC06

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3305	212211805637	RST SM 0603 RC0603 22R PM5
3306	232270260101	RST SM 0603 RC21 100R PM5
3307	232270260101	RST SM 0603 RC21 100R PM5
3308	232270260101	RST SM 0603 RC21 100R PM5
3309	232270260101	RST SM 0603 RC21 100R PM5
3310	232270260101	RST SM 0603 RC21 100R PM5
3311	232270260101	RST SM 0603 RC21 100R PM5
3312	232270260101	RST SM 0603 RC21 100R PM5
3313	232270260101	RST SM 0603 RC21 100R PM5
3314	235003510101	RST NETW SM ARV24 4X100R PM5
3315	235003510101	RST NETW SM ARV24 4X100R PM5
3316	235003510101	RST NETW SM ARV24 4X100R PM5
3317	235003510101	RST NETW SM ARV24 4X100R PM5
3318	235003510101	RST NETW SM ARV24 4X100R PM5
3319	235003510101	RST NETW SM ARV24 4X100R PM5
3320	235003510101	RST NETW SM ARV24 4X100R PM5
3321	235003510101	RST NETW SM ARV24 4X100R PM5
3322	212211805637	RST SM 0603 RC0603 22R PM5
3323	212211805637	RST SM 0603 RC0603 22R PM5
3351	212211805689	RST SM 0603 RC0603 1M PM5
3352	232270260101	RST SM 0603 RC21 100R PM5
3353	232270260103	RST SM 0603 RC21 10K PM5
3354	232270260101	RST SM 0603 RC21 100R PM5
3358	232270260103	RST SM 0603 RC21 10K PM5
3359	232270260101	RST SM 0603 RC21 100R PM5
3360	232270260103	RST SM 0603 RC21 10K PM5
3361	232270260103	RST SM 0603 RC21 10K PM5
3364	232270260103	RST SM 0603 RC21 10K PM5
3365	232270260103	RST SM 0603 RC21 10K PM5
3366	232270260103	RST SM 0603 RC21 10K PM5
3367	232270260103	RST SM 0603 RC21 10K PM5
3368	232270260101	RST SM 0603 RC21 100R PM5
3369	232270260101	RST SM 0603 RC21 100R PM5
3370	232270260103	RST SM 0603 RC21 10K PM5
3371	232270260103	RST SM 0603 RC21 10K PM5
3372	232270260103	RST SM 0603 RC21 10K PM5
3373	232270260101	RST SM 0603 RC21 100R PM5
3374	232270260101	RST SM 0603 RC21 100R PM5
3379	232270260101	RST SM 0603 RC21 100R PM5
3380	232270260101	RST SM 0603 RC21 100R PM5
3382	232270260103	RST SM 0603 RC21 10K PM5
3391	232270296001	RST SM 0603 JUMP. MAX 0R05
3392	232270296001	RST SM 0603 JUMP. MAX 0R05
3401	232270463901	RST SM 0603 RC22H 390R PM1
3402	232270260101	RST SM 0603 RC21 100R PM5
3403	212211805637	RST SM 0603 RC0603 22R PM5
3405	232270260103	RST SM 0603 RC21 10K PM5
3408	212211805637	RST SM 0603 RC0603 22R PM5
3409	212211805637	RST SM 0603 RC0603 22R PM5
3410	212211805637	RST SM 0603 RC0603 22R PM5
3411	212211805637	RST SM 0603 RC0603 22R PM5
3412	212211805637	RST SM 0603 RC0603 22R PM5
3413	212211805656	RST SM 0603 RC0603 1K PM5
3414	232270260122	RST SM 0603 RC21 1K2 PM5
3416	232270260101	RST SM 0603 RC21 100R PM5
3501	232270260479	RST SM 0603 RC21 47R PM5
3502	232270260479	RST SM 0603 RC21 47R PM5
3503	232270260479	RST SM 0603 RC21 47R PM5
3504	232270260103	RST SM 0603 RC21 10K PM5
3506	232270260101	RST SM 0603 RC21 100R PM5
3507	232270260101	RST SM 0603 RC21 100R PM5
3508	232270260101	RST SM 0603 RC21 100R PM5
3509	232270260221	RST SM 0603 RC21 220R PM5
3510	232270260103	RST SM 0603 RC21 10K PM5
3511	232270260221	RST SM 0603 RC21 220R PM5
3512	232270260103	RST SM 0603 RC21 10K PM5
3515	232270260103	RST SM 0603 RC21 10K PM5
3516	232270260103	RST SM 0603 RC21 10K PM5
3517	212211805683	RST SM 0603 RC0603 100K PM5
3518	232270260103	RST SM 0603 RC21 10K PM5
3519	232270260103	RST SM 0603 RC21 10K PM5
3520	232270260103	RST SM 0603 RC21 10K PM5
3521	212211805683	RST SM 0603 RC0603 100K PM5
3522	232270260103	RST SM 0603 RC21 10K PM5
3523	232270260103	RST SM 0603 RC21 10K PM5
3524	212211805683	RST SM 0603 RC0603 100K PM5
3525	232270260103	RST SM 0603 RC21 10K PM5
3526	232270260103	RST SM 0603 RC21 10K PM5
3527	232270260223	RST SM 0603 RC21 22K PM5
3532	232270260103	RST SM 0603 RC21 10K PM5
3533	232270296001	RST SM 0603 JUMP. MAX 0R05
3539	232270260103	RST SM 0603 RC21 10K PM5
		
5201	242254945582	IND FXD 0805 EMI 100MHZ 300R
5202	242254945582	IND FXD 0805 EMI 100MHZ 300R

5204	242254945582	IND FXD 0805 EMI 100MHZ 300R
5301	242254945582	IND FXD 0805 EMI 100MHZ 300R
5302	242254945582	IND FXD 0805 EMI 100MHZ 300R
5351	242254945582	IND FXD 0805 EMI 100MHZ 300R
5401	242254945582	IND FXD 0805 EMI 100MHZ 300R
5402	242254945582	IND FXD 0805 EMI 100MHZ 300R
5403	242254945582	IND FXD 0805 EMI 100MHZ 300R
5404	242254945582	IND FXD 0805 EMI 100MHZ 300R
5405	242254945582	IND FXD 0805 EMI 100MHZ 300R
5406	242254945582	IND FXD 0805 EMI 100MHZ 300R
5407	242254945582	IND FXD 0805 EMI 100MHZ 300R
5409	242254945582	IND FXD 0805 EMI 100MHZ 300R
5410	242254945582	IND FXD 0805 EMI 100MHZ 300R
5412	242254945582	IND FXD 0805 EMI 100MHZ 300R
5413	242254945579	IND FXD 1206 EMI 100MHZ 100R
5414	242254945579	IND FXD 1206 EMI 100MHZ 100R
5416	242254945579	IND FXD 1206 EMI 100MHZ 100R
5501	242254945579	IND FXD 1206 EMI 100MHZ 100R
5502	242254945579	IND FXD 1206 EMI 100MHZ 100R
		
6201	933913910115	DIO SIG SM BAS32L (PHSE)
6202	933913910115	DIO SIG SM BAS32L (PHSE)
6203	933913910115	DIO SIG SM BAS32L (PHSE)
6204	933913910115	DIO SIG SM BAS32L (PHSE)
6401	932220675682	DIO REC M100AL-5301-E3 (VISH)
6402	932220675682	DIO REC M100AL-5301-E3 (VISH)
6403	932220628682	DIO REC SB140AL-5301E3 (VISH)
		
7201	932216972682	IC SM AT24C02N-10SC-2.7(ATME)
7202	932216972682	IC SM AT24C02N-10SC-2.7(ATME)
7301	93222292671	IC SM K4D263238G-VC36 (SMGK)
7302	932216732668	IC SM LD1117S25 (ST00)
7351	313815867041	CPU IC ASSY-LPL(7351)
7351	932222343682	IC SM NT68F631ALG (NOVA)
7353	313815867051	EEPROM IC ASSY-LPL(7353)
7353	932214725682	IC M24C16-WBN6P (ST00)
7401	823827716351	SCALER IC
7403	932220099685	IC SM LD1117AS18 (ST00)
7404	932216732668	IC SM LD1117S25 (ST00)
7405	932216733668	IC SM LD1117S33 (ST00)
7501	933769900215	TRA SIG SM BC857C (PHSE)
7502	933769900215	TRA SIG SM BC857C (PHSE)
7503	932217440685	TRA SIG SM KRC102S (KECO)
7504	932216638668	FET POW SM SI5441DC-E3 (VISH)
7505	932216733668	IC SM LD1117S33 (ST00)
7507	932216733668	IC SM LD1117S33 (ST00)
7509	932216638668	FET POW SM SI5441DC-E3 (VISH)
7510	932216638668	FET POW SM SI5441DC-E3 (VISH)
7511	932217440685	TRA SIG SM KRC102S (KECO)
7512	932217440685	TRA SIG SM KRC102S (KECO)
PCB Assy		
1052	313815865861	CONTROL ASSY
various		
1951	243812800196	SWI TACT H=5 GY 160G SKHHAM
1952	243812800196	SWI TACT H=5 GY 160G SKHHAM
1953	243812800196	SWI TACT H=5 GY 160G SKHHAM
1954	243812800196	SWI TACT H=5 GY 160G SKHHAM
1955	243812800196	SWI TACT H=5 GY 160G SKHHAM
1956	243812800196	SWI TACT H=5 GY 160G SKHHAM
1957	243812800196	SWI TACT H=5 GY 160G SKHHAM
1960	243812800196	SWI TACT H=5 GY 160G SKHHAM
1961	242202518897	CON H 7P M 2.00 63367
		
2951	223858619812	CER2 0603 Y5V 50V 100N P8020
2952	223858619812	CER2 0603 Y5V 50V 100N P8020
		
3951	232270260101	RST SM 0603 RC21 100R PM5
3952	232270260473	RST SM 0603 RC21 47K PM5
3953	232270260103	RST SM 0603 RC21 10K PM5
3954	212211805656	RST SM 0603 RC0603 1K PM5
3955	232270260473	RST SM 0603 RC21 47K PM5
3956	232270260103	RST SM 0603 RC21 10K PM5
3957	212211805656	RST SM 0603 RC0603 1K PM5
		
6951	932214603682	LED VS L-3WYGW (KIEL)
PCB Assy		
1054	313815867111	USB ASSY(200 WP7)
various		
1601	242202518896	CON H 6P M 2.00 63366
1608	823827732071	CABLE RING TERM/45/FAST AWG18
1609	823827732069	CABLE RING TERM/85/FAST AWG18
1610	243854300085	RES XTL SM 24MHZ 20P SMD-49
1651	242202518953	SOC USB V 4P F 2.0/2.5 5401

1652	242202518955	SOC USB V 4P F 2.5 5411
1653	242202518957	SOC USB V 8P F 2.0/2.5 5402
1654	242202518953	SOC USB V 4P F 2.0/2.5 5401
		
2601	223878615649	CER2 0603 X7R 16V 100N PM10
2603	202203100179	ELCAP SM HV 25V 10U PM20
2604	223858619812	CER2 0603 Y5V 50V 100N P8020
2621	223878615649	CER2 0603 X7R 16V 100N PM10
2623	223858615636	CER2 0603 X7R 50V 10N PM10
2625	222224119876	CER2 1206 Y5V 10V 10U P8020
2631	202202000963	ELCAP SM LV 25V 100U PM20
2633	223878615649	CER2 0603 X7R 16V 100N PM10
2634	202202000963	ELCAP SM LV 25V 100U PM20
2635	223878615643	CER2 0603 X7R 16V 33N PM10
2636	222278015663	CER2 0805 X7R 16V 1U PM10
2651	202001293803	ELCAP SM RV2 16V 100U PM20
2652	223878615649	CER2 0603 X7R 16V 100N PM10
2655	202001293803	ELCAP SM RV2 16V 100U PM20
2656	223878615649	CER2 0603 X7R 16V 100N PM10
2661	202001293803	ELCAP SM RV2 16V 100U PM20
2662	223878615649	CER2 0603 X7R 16V 100N PM10
2665	202001293803	ELCAP SM RV2 16V 100U PM20
2666	223878615649	CER2 0603 X7R 16V 100N PM10
2671	223878615649	CER2 0603 X7R 16V 100N PM10
2675	223878615649	CER2 0603 X7R 16V 100N PM10
2680	223878615649	CER2 0603 X7R 16V 100N PM10
2681	223878615649	CER2 0603 X7R 16V 100N PM10
2682	223886715279	CER1 0603 NP0 50V 27P PM5
2683	223886715279	CER1 0603 NP0 50V 27P PM5
2684	223878615649	CER2 0603 X7R 16V 100N PM10
2685	223878615649	CER2 0603 X7R 16V 100N PM10
2691	223878615649	CER2 0603 X7R 16V 100N PM10
2692	223878615649	CER2 0603 X7R 16V 100N PM10
2693	223878615649	CER2 0603 X7R 16V 100N PM10
2694	223878615649	CER2 0603 X7R 16V 100N PM10
2695	223878615649	CER2 0603 X7R 16V 100N PM10
2696	223878615649	CER2 0603 X7R 16V 100N PM10
2697	223878615649	CER2 0603 X7R 16V 100N PM10
2698	223878615649	CER2 0603 X7R 16V 100N PM10
2699	223878615649	CER2 0603 X7R 16V 100N PM10
		
3622	232270260103	RST SM 0603 RC21 10K PM5
3623	212211805683	RST SM 0603 RC0603 100K PM5
3634	232270260202	RST SM 0603 RC21 2K PM5
3681	212211805672	RST SM 0603 RC0603 15K PM5
3682	212211805683	RST SM 0603 RC0603 100K PM5
3683	212211805672	RST SM 0603 RC0603 15K PM5
3685	212211805672	RST SM 0603 RC0603 15K PM5
3687	212211805672	RST SM 0603 RC0603 15K PM5
3689	212211805672	RST SM 0603 RC0603 15K PM5
3691	212211805672	RST SM 0603 RC0603 15K PM5
3692	212211805672	RST SM 0603 RC0603 15K PM5
3693	212211805672	RST SM 0603 RC0603 15K PM5
4631	232270296001	RST SM 0603 JUMP. MAX 0R05
		
5601	242254900126	IND FXD 0805 EMI 100MHZ 120R
5602	242254900126	IND FXD 0805 EMI 100MHZ 120R
5603	242254900126	IND FXD 0805 EMI 100MHZ 120R
5621	242254900126	IND FXD 0805 EMI 100MHZ 120R
5622	242254900126	IND FXD 0805 EMI 100MHZ 120R
5634	313818875771	COI CHOKE 35UH 82M OHM DR10X8
5651	242254900126	IND FXD 0805 EMI 100MHZ 120R
5653	242254900126	IND FXD 0805 EMI 100MHZ 120R
5655	242254900126	IND FXD 0805 EMI 100MHZ 120R
5657	242254900126	IND FXD 0805 EMI 100MHZ 120R
5659	242254900126	IND FXD 0805 EMI 100MHZ 120R
		
6634	932221745685	DIO REC SM SSA34-E3 (VISH)
6635	932221745685	DIO REC SM SSA34-E3 (VISH)
6662	933913910115	DIO SIG SM BAS32-1 (PHSE)
		
7622	932217440685	TRA SIG SM KRC102S (KECO)
7625	932216638668	FET POW SM SI5441D-C3 (VISH)
7631	932222352668	IC SM TPS54357PWP (TI00)
7651	932222162671	IC SM CY7C65640-LFXC (CYPR)
7671	932222269668	IC SM TPS2062DG4 (TI00)
7675	932222269668	IC SM TPS2062DG4 (TI00)

Diversity of 200WP7EB/00 compared with 200P7ES/00

Item	12NC	Description
	863900017042	200WP7EB/00
0602	313811709571	E-D.F.U.
0130	313815569641	ENERGY STAR LABEL
0004	313815761131	SUPER ERGO BASE ASSY
0140	313800990651	PROCESS BOX
0300	282206240595	INK CARTRIDGE -EP-T
0030	313815761231	BEZEL ASSY
0031	313815418101	BEZEL
0032	313815417971	BEZEL-DECO
0033	313815417981	CONTROL KNOB
0040	313815761121	BACK COVER ASSY
0042	313815418001	MIDDLE COVER
0116	313810440571	HOUSING COVER

Scaler Diagram-1

CONTENTS

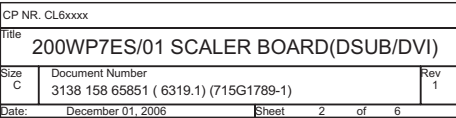
SCHEMATIC Name	SHEET
01. Contents	1
02. DSUB/DVI	2
03. MCU	3
04. SCALER	4
05. DDR	5
06. IO	6

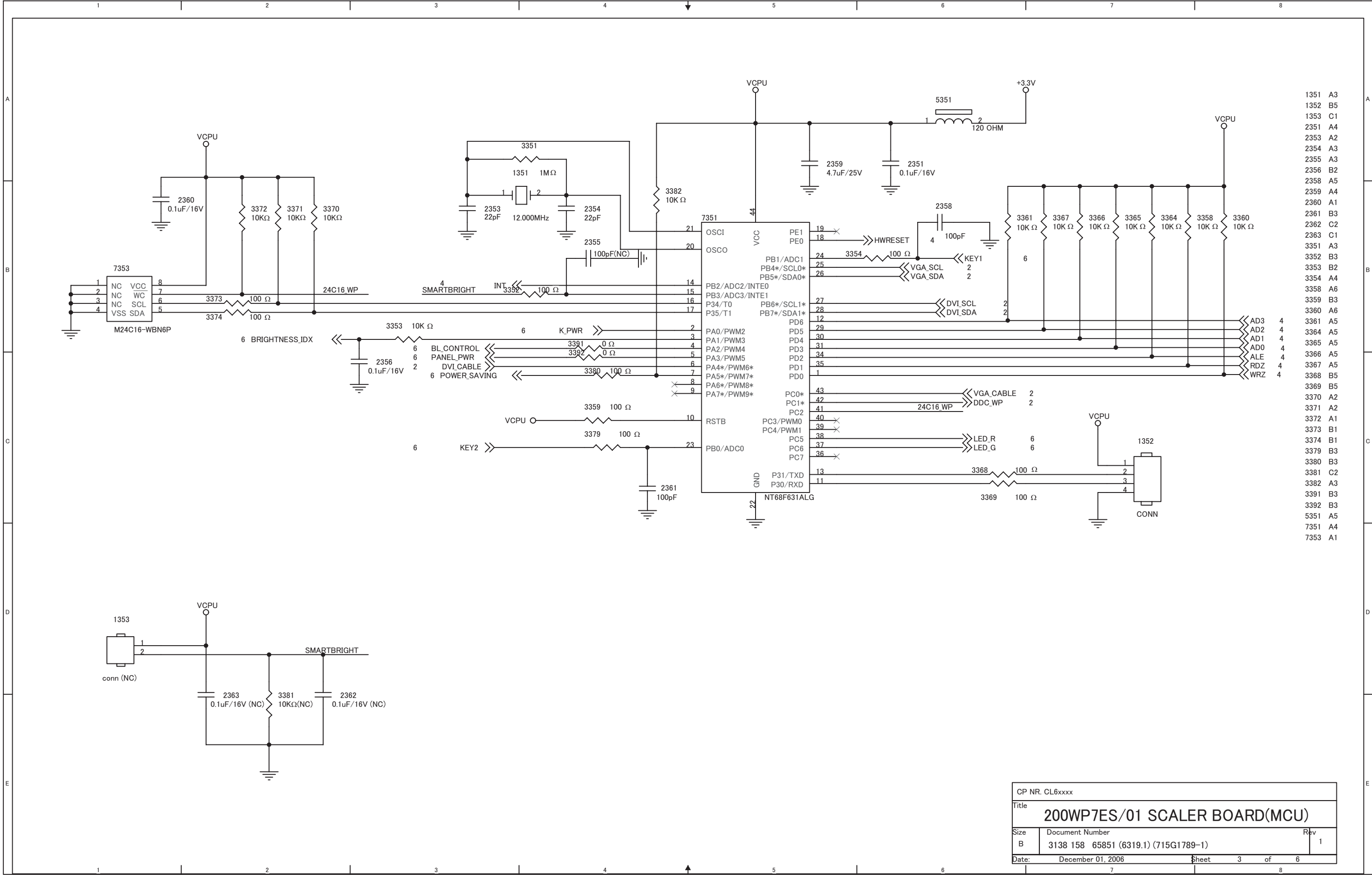
REVISION HISTORY

Date	Author	Ver	Comments
2005-09-14	Jerry Chen	A	PHILIPS UH7 200P7 SCALER SEHEMATIC FOR PROTOTYPE
2005-11-23	Jerry Chen	B	PHILIPS UH7 200WP7 SCALER SEHEMATIC FOR 2nd MODEL
2006-02-09	Jerry Chen	C	5205 /5206 /5207 change to 3215 /3216/3217 22R

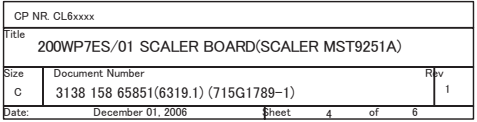
Approval	Position	Signature	Date

CP NR. CL6xxxx			
Title 200WP7ES/01 SCALER BOARD(Contents)			
Size A	Document Number 3138 158 65851(6319.1) (715G1789-1)		Rev 1
Date: December 01, 2006		Sheet 1	of 6

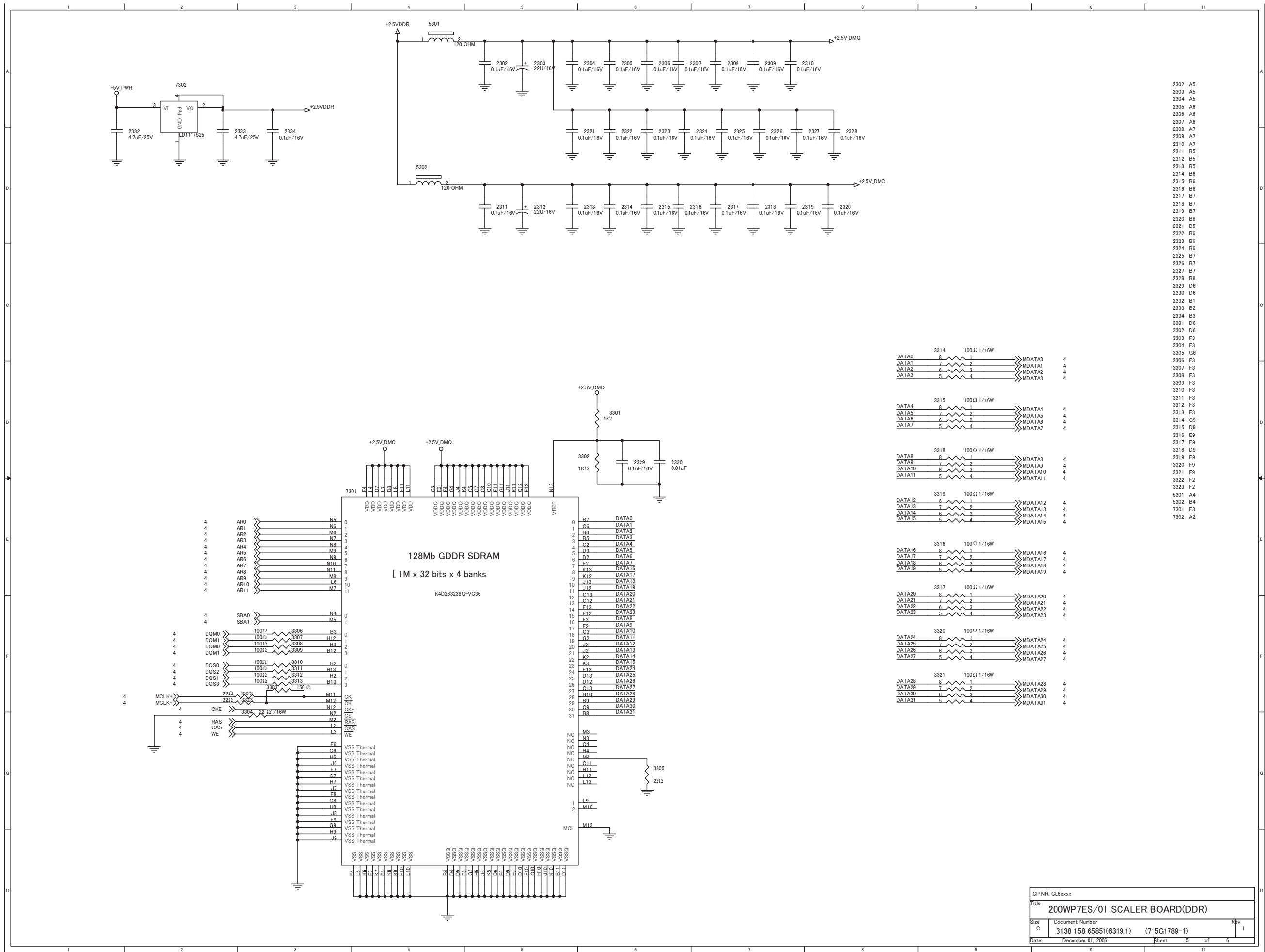


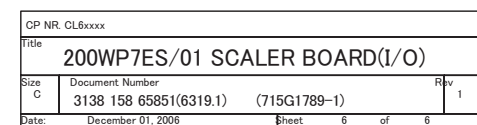


200WP7 LCD

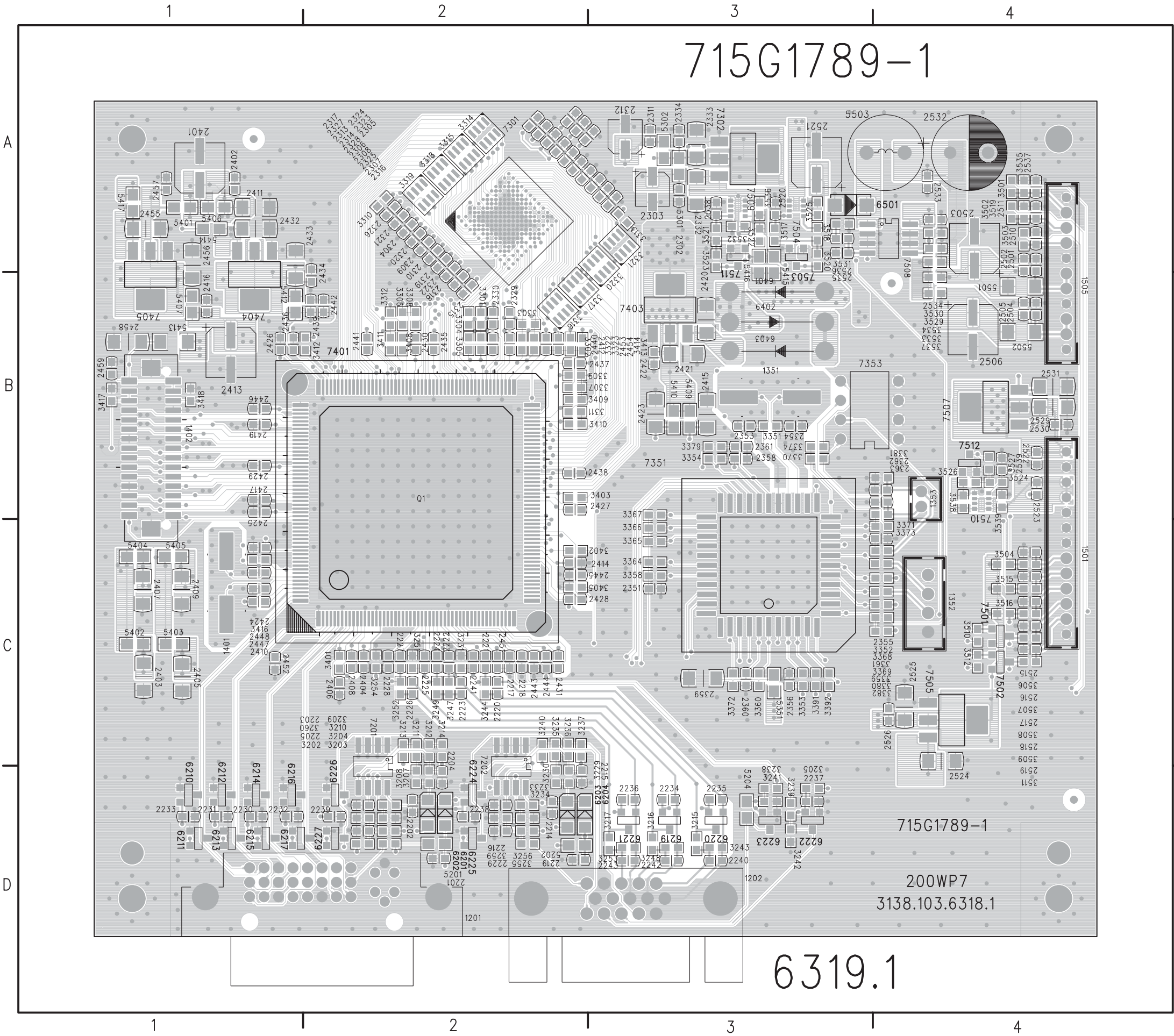


Scaler Diagram-5

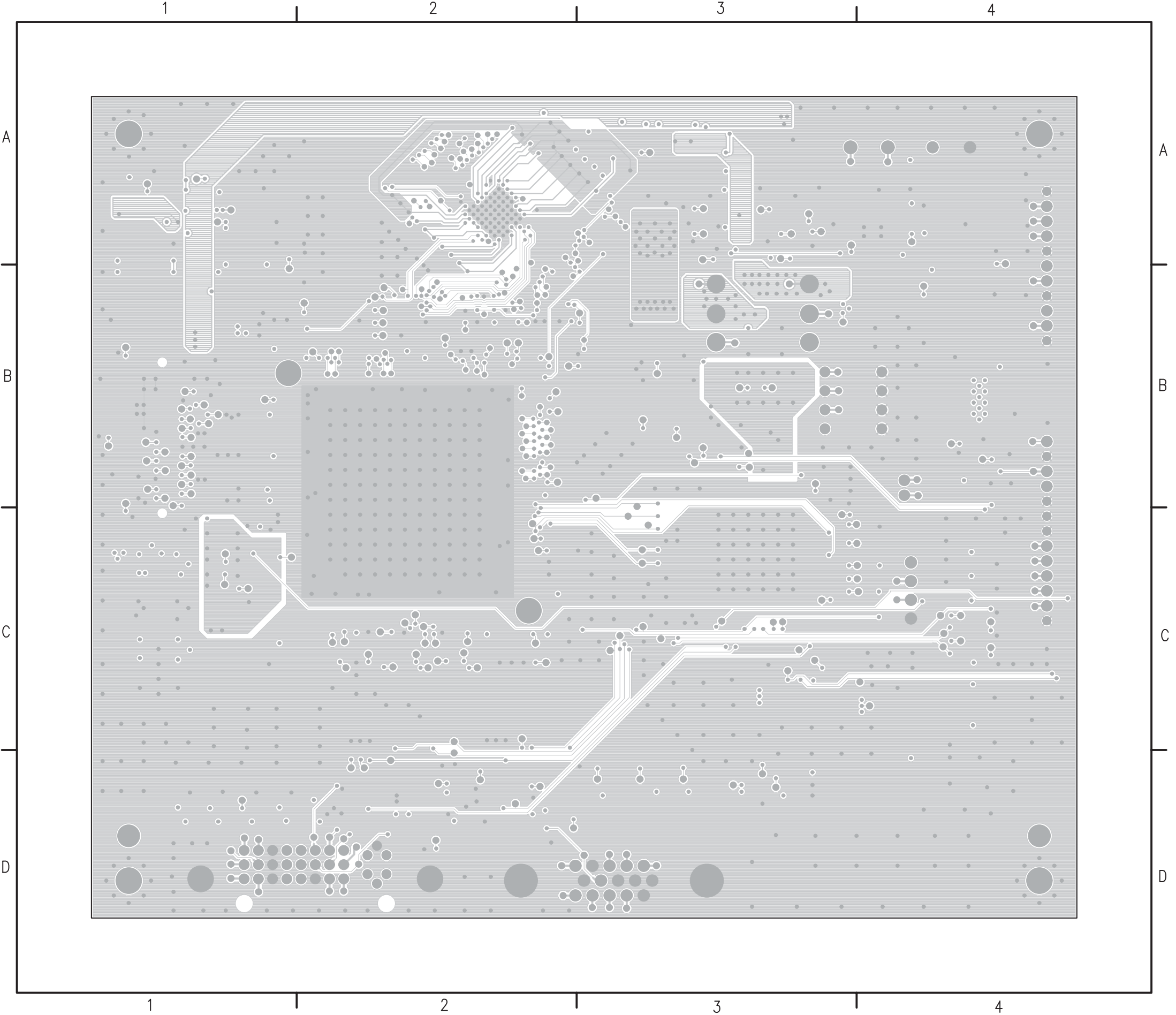




Scaler Board C.B.A.-1



1201	D2	2313	A2	2425	B1	2531	B4	3306	B2	3417	B1	5415	A3
1202	D3	2314	A2	2426	B1	2532	A4	3307	B2	3418	B1	5416	A3
1351	B3	2315	B2	2427	B2	2533	A4	3308	B2	3501	A4	5417	A1
1352	C4	2316	A3	2428	C2	2534	A4	3309	B2	3502	A4	5501	B4
1353	B4	2317	A2	2429	B1	2535	A3	3310	A2	3503	A4	5502	B4
1401	C1	2318	B2	2430	B2	2536	A3	3311	B2	3504	C4	5503	A4
1402	B1	2319	A2	2431	C2	2537	A4	3312	B2	3506	C4	6201	D2
1501	B4	2320	A2	2432	A1	2538	A3	3313	A3	3507	C4	6202	D2
1505	A4	2321	A2	2433	B1	2539	B4	3314	A2	3508	C4	6203	D2
2201	D2	2322	A2	2434	B2	3202	D2	3315	A2	3509	C4	6204	D2
2202	D2	2323	A2	2435	B2	3203	D2	3316	B2	3510	C4	6210	D1
2203	D2	2324	A2	2436	B1	3204	D2	3317	B2	3511	C4	6211	D1
2204	D2	2325	A2	2437	B2	3205	D3	3318	A2	3512	C4	6212	D1
2205	D2	2326	A2	2438	B2	3207	D2	3319	A2	3515	C4	6213	D1
2214	D2	2327	A2	2439	B2	3208	D2	3320	B3	3516	C4	6214	D1
2215	D2	2328	A2	2440	B2	3209	D2	3321	A3	3517	A3	6215	D1
2216	D2	2329	B2	2441	B2	3210	D2	3322	B2	3518	A3	6216	D1
2217	C2	2330	B2	2442	B2	3211	C2	3323	B2	3519	A4	6217	D1
2218	C2	2332	A3	2443	C2	3212	C2	3351	B3	3520	A3	6219	D3
2219	D2	2333	A3	2444	C2	3213	C2	3352	C4	3521	A3	6220	D3
2220	C2	2334	A3	2445	C2	3214	C2	3353	C3	3522	A3	6221	D3
2221	C2	2351	C3	2446	B1	3215	D3	3354	B3	3523	A3	6222	D3
2222	C2	2353	B3	2447	C1	3216	D3	3358	C3	3524	B4	6223	D3
2223	C2	2354	B3	2448	C1	3217	D3	3359	C4	3525	A3	6224	D2
2224	C2	2355	C3	2451	C2	3229	D2	3360	C3	3526	B4	6225	D2
2225	C2	2356	C3	2452	C1	3230	D2	3361	C4	3527	B4	6226	D2
2226	C2	2358	B3	2453	B2	3231	C2	3364	C3	3529	A4	6227	D2
2227	C2	2359	C3	2454	B2	3233	D2	3365	C3	3530	A4	6401	B3
2228	C2	2360	C3	2455	A1	3234	D2	3366	C3	3531	A3	6402	B3
2229	D2	2361	B3	2456	B1	3235	C2	3367	B3	3532	A3	6403	B3
2230	D1	2362	B4	2457	A1	3236	C2	3368	C3	3533	B4	6501	A3
2231	D1	2363	B4	2458	B1	3237	C2	3369	C3	3534	A4	7201	C2
2232	D1	2401	A1	2459	B1	3238	D3	3370	B3	3535	A4	7202	C2
2233	D1	2402	A1	2501	A4	3239	D3	3371	B4	3536	A3	7301	A2
2234	D3	2403	C1	2502	A4	3240	C2	3372	C3	3537	B4	7302	A3
2235	D3	2404	C2	2503	A4	3241	D3	3373	C4	3538	B4	7351	C3
2236	D3	2405	C1	2504	B4	3242	D3	3374	B3	3539	B4	7353	B4
2237	D3	2406	C2	2505	B4	3243	D3	3379	B3	5201	D2	7401	B2
2238	D2	2407	C1	2506	B4	3244	C2	3380	C4	5202	D2	7403	B3
2239	D2	2408	C2	2510	A4	3247	C2	3381	B4	5204	D3	7404	B1
2240	D3	2409	C1	2511	A4	3248	D3	3382	C4	5301	A3	7405	B1
2241	C2	2410	C1	2515	C4	3249	C2	3391	C3	5302	A3	7501	C4
2242	D3	2411	A1	2516	C4	3251	C2	3392	C3	5351	C3	7502	C4
2243	D3	2412	B2	2517	C4	3252	C2	3401	C2	5401	A1	7503	A3
2302	A3	2413	B1	2518	C4	3253	D3	3402	C2	5402	C1	7504	A3
2303	A3	2414	C2	2519	C4	3254	C2	3403	B2	5403	C1	7505	C4
2304	A2	2415	B3	2520	A3	3255	D2	3405	C2	5404	C1	7507	B4
2305	A2	2416	B1	2521	A3	3256	D2	3408	B2	5405	C1	7508	A3
2306	A2	2417	B1	2522	B4	3259	D2	3409	B2	5406	A1	7509	A3
2307	A3	2419	B1	2523	B4	3260	D2	3410	B2	5407	B1	7510	B4
2308	A2	2420	B3	2524	C4	3301	B2	3411	B2	5409	B3	7511	A3
2309	A2	2421	B3	2525	C4	3302	B2	3412	B1	5410	B3	7512	B4
2310	A2	2422	B3	2526	C4	3303	B2	3413	B2	5412	B1		
2311	A3	2423	B3	2529	B4	3304	B2	3414	B2	5413	B1		
2312	A3	2424	C1	2530	B4	3305	B2	3416	C1	5414	A1		



Updated Parts

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According to the ECO-CA005956, Add QSG-ergo base and Jig on P.E. bag for 200WP7, Following is the detail

1. Item 0129 Qty from 1 to 2, and add new Item: 0142-313815524581- QUICK SET GUIDE-ERGO BASE

2.

REF	12NC	Description
1	863900016908	200WP7ES/00
2	863900017042	200WP7EB/00
3	863900017096	200WP7ES/01
4	863900017104	200WP7EB/01

REF	Action	Item	12NC	Description
1, 3	From	0004	313815761011	SUPER ERGO BASE ASSY
	To	0004	313815761012	SUPER ERGO BASE ASSY
2, 4	From	0004	313815761131	SUPER ERGO BASE ASSY
	To	0004	313815761132	SUPER ERGO BASE ASSY

According to the ECO-CA006109, designer changed the scaler board version of 200WP7-AUO to improve phase and tail noise problem, following is the detail

REF	Action	Item	12NC	Description
ALL	From	0001	313810363221	SCALER PCB
	To	0001	313810363222	SCALER PCB
ALL	From	2425	202203100205	ELCAP SM RVS 25V 47U PM20 R
			202203100206	ELCAP SM HV 25V 47U PM20 R
	To	2425	823827736068	ELCAP 470UF 16V EB
			823827736069	ELCAP 470UF 16V LZ
ALL	From	3231	212211805642	RST SM 0603 RC0603 75R PM5 R
			232270260759	RST SM 0603 RC21 75R PM5 R
	To	3231	212211805643	RST SM 0603 RC0603 100R PM5 R
			232270260101	RST SM 0603 RC21 100R PM5 R
ALL	From	3251	212211805642	RST SM 0603 RC0603 75R PM5 R
			232270260759	RST SM 0603 RC21 75R PM5 R
	To	3251	212211805643	RST SM 0603 RC0603 100R PM5 R
			232270260101	RST SM 0603 RC21 100R PM5 R
ALL	From	3254	212211805642	RST SM 0603 RC0603 75R PM5 R
			232270260759	RST SM 0603 RC21 75R PM5 R
	To	3254	212211805643	RST SM 0603 RC0603 100R PM5 R
			232270260101	RST SM 0603 RC21 100R PM5 R
ALL	Del	3261	212211805631	RST SM 0603 JUMP. MAX 0R05 R
			232270296001	RST SM 0603 JUMP. MAX 0R05 R
ALL	Del	3262	212211805631	RST SM 0603 JUMP. MAX 0R05 R
			232270296001	RST SM 0603 JUMP. MAX 0R05 R
ALL	Del	3263	212211805631	RST SM 0603 JUMP. MAX 0R05 R
			232270296001	RST SM 0603 JUMP. MAX 0R05 R
ALL	New	5205	242254900601	IND FXD 0603 EMI 100MHZ 30R R
			242254943769	IND FXD 0603 EMI 100MHZ 30R R
ALL	New	5206	242254900601	IND FXD 0603 EMI 100MHZ 30R R
			242254943769	IND FXD 0603 EMI 100MHZ 30R R
ALL	New	5207	242254900601	IND FXD 0603 EMI 100MHZ 30R R
			242254943769	IND FXD 0603 EMI 100MHZ 30R R

Revision list

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Manual 12NC(VERSION)	Release Date	Change Instruction
3138 106 10503	Apr-7-06	Initial Release
3138 106 10503	Apr-20-06	Panel changed(P84)
3138 106 10503	Apr-28-06	Add QSG-ergo base and Jig on P.E. bag (P86)
3138 106 10503	Jun-02-06	Change scaler board version(P86)
3138 106 10504	Dec-04-06	Add 200WP7ES/01 (P88~P95)